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# THE UNITED STATES OF AMERICA

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

**UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office**

**August 04, 2004**

**THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM  
THE RECORDS OF THE UNITED STATES PATENT AND TRADEMARK  
OFFICE OF THOSE PAPERS OF THE BELOW IDENTIFIED PATENT  
APPLICATION THAT MET THE REQUIREMENTS TO BE GRANTED A  
FILING DATE.**

**APPLICATION NUMBER: PCT/US03/27772**

**FILING DATE: September 04, 2003**

**RELATED PCT APPLICATION NUMBER: PCT/US04/09947**

**By Authority of the  
COMMISSIONER OF PATENTS AND TRADEMARKS**



**P. R. GRANT  
Certifying Officer**

## **PRIORITY DOCUMENT**

**SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH RULE 17.1(a) OR (b)**

TRANSMITTAL LETTER TO THE  
UNITED STATES RECEIVING OFFICE

International Application No.	PCT/US03/27772
Agency Docket No.	TPI-350

## I. Certification under 37 CFR 1.10 (if applicable)

Express Mail mailing number
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Date of Deposit
-----------------

I hereby certify that the application/correspondence attached hereto is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

Signature of person mailing correspondence
--

Typed or printed name of person mailing correspondence
--

II. ☐ New International Application

TITLE	
-------	--

Earliest priority date (Day/Month/Year)
--

**SCREENING DISCLOSURE INFORMATION:** In order to assist in screening the accompanying international application for purposes of determining whether a license for foreign transmittal should and could be granted and for other purposes, the following information is supplied. (Note: check as many boxes as apply):

- A. ☐ The invention disclosed was not made in the United States.
- B. ☐ There is no prior U.S. application relating to this invention.
- C. ☐ The following prior U.S. application(s) contain subject matter which is related to the invention disclosed in the attached international application. (NOTE: priority to these applications may or may not be claimed on form PCT/RO/101 (Request) and this listing does not constitute a claim for priority.)

application no.		filed on	
application no.		filed on	

- D. ☐ The present international application contains additional subject matter not found in the prior U.S. application(s) identified in paragraph C. above. The additional subject matter is found on pages  and ☐ DOES NOT ALTER ☐ MIGHT BE CONSIDERED TO ALTER the general nature of the invention in a manner which would require the U.S. application to have been made available for inspection by the appropriate defense agencies under 35 U.S.C. 181 and 37 CFR 5.1. See 37 CFR 5.15

III. ☒ A Response to an Invitation from the RO/US. The following document(s) is(are) enclosed:

- A. ☐ A Request for An Extension of Time to File a Response
- B. ☒ A Power of Attorney (General or Regular)
- C. ☒ Replacement pages:

pages	1-5	of the request (PCT/RO/101)	pages		of the figures
pages		of the description	pages		of the abstract
pages		of the claims			

- D. ☐ Submission of Priority Documents

Priority document		Priority document	
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- E. ☐ Fees as specified on attached Fee Calculation sheet form PCT/RO/101 annex

IV. ☐ A Request for Rectification under PCT 91 ☐ A Petition ☐ A Sequence Listing DisketteV. ☒ Other (please specify):

Replacement p.1 to correct Applicant designation; p. 2 and 3 to correct inventor addresses and citizenship and to include Applicant inadvertently omitted; p.4 to include Egypt and US CIP; p.5 to correct typo, "Cont. of Box V" vs. "VI"

The person  
signing this  
form is the:

<input type="checkbox"/> Applicant
<input checked="" type="checkbox"/> Attorney/Agent (Reg. No.) 45,332
<input type="checkbox"/> Common Representative

Frank C. Eisenschenk, Ph.D.

Typed name of signer

*Frank C. Eisenschenk*

Signature



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PCT US03 27772

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## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

04 SEP 2003 (04.09.03)

International Filing Date

PCT INTERNATIONAL  
APPLICATION RO/US

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) TPI-350 PCT

<b>Box No. I TITLE OF INVENTION</b>	
Pharmaceutical Co-Crystal Compositions	
<b>Box No. II APPLICANT</b> <input type="checkbox"/> This person is also inventor	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	
TRANSFORM PHARMACEUTICALS, INC. 29 Hartwell Avenue Lexington, MA 02421 US	
Telephone No. (781) 674-8000	
Facsimile No. (781) 863-6519	
Teleprinter No.	
Applicant's registration No. with the Office	
State (that is, country) of nationality: US	State (that is, country) of residence: US
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<b>Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)</b>	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)	
UNIVERSITY OF SOUTH FLORIDA Division of Patents and Licensing 4202 East Fowler Avenue, FAO 126 Tampa, FL 33620-7900 US	
This person is: <input checked="" type="checkbox"/> applicant only <input type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)	
Applicant's registration No. with the Office	
State (that is, country) of nationality: US	State (that is, country) of residence: US
This person is applicant for the purposes of: <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<input checked="" type="checkbox"/> Further applicants and/or (further) inventors are indicated on a continuation sheet.	
<b>Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE</b>	
The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: <input checked="" type="checkbox"/> agent <input type="checkbox"/> common representative	
Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)	
EISENSCHENK, Frank C. Saliwanchik, Lloyd & Saliwanchik A Professional Association 2421 N.W. 41st Street, Suite A-1 Gainesville, FL 32606-6669 US	
Telephone No. 352-375-8100	
Facsimile No. 352-372-5800	
Teleprinter No.	
Agent's registration No. with the Office 45,332	
<input type="checkbox"/> Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.	

Sheet No. ...2...

Continuation of Box No. III <b>FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)</b>	
<i>If none of the following sub-boxes is used, this sheet should not be included in the request.</i>	
<p><small>Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</small></p> <p><b>Almarsson, Örn</b>  <b>22 Farmington Drive</b>  <b>Shrewsbury, MA 01545</b>  <b>US</b></p>	<p><b>This person is:</b></p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)</p> <p>Applicant's registration No. with the Office</p>
State (that is, country) of nationality: <b>IS</b>	State (that is, country) of residence: <b>US</b>
<p>This person is applicant for the purposes of:    <input type="checkbox"/> all designated States    <input type="checkbox"/> all designated States except the United States of America    <input checked="" type="checkbox"/> the United States of America only    <input type="checkbox"/> the States indicated in the Supplemental Box</p>	
<p><small>Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</small></p> <p><b>Bourghol Hickey, Magali</b>  <b>342 Malden Street</b>  <b>Medford, MA 02155</b>  <b>US</b></p>	<p><b>This person is:</b></p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)</p> <p>Applicant's registration No. with the Office</p>
State (that is, country) of nationality: <b>US</b>	State (that is, country) of residence: <b>US</b>
<p>This person is applicant for the purposes of:    <input type="checkbox"/> all designated States    <input type="checkbox"/> all designated States except the United States of America    <input checked="" type="checkbox"/> the United States of America only    <input type="checkbox"/> the States indicated in the Supplemental Box</p>	
<p><small>Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</small></p> <p><b>Peterson, Matthew</b>  <b>60 Linda Avenue</b>  <b>Framingham, MA 01701</b>  <b>US</b></p>	<p><b>This person is:</b></p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)</p> <p>Applicant's registration No. with the Office</p>
State (that is, country) of nationality: <b>US</b>	State (that is, country) of residence: <b>US</b>
<p>This person is applicant for the purposes of:    <input type="checkbox"/> all designated States    <input type="checkbox"/> all designated States except the United States of America    <input checked="" type="checkbox"/> the United States of America only    <input type="checkbox"/> the States indicated in the Supplemental Box</p>	
<p><small>Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</small></p> <p><b>Zaworotko, Michael J.</b>  <b>4202 E. Fowler Ave. (USF30244)</b>  <b>Tampa, FL 3362</b>  <b>US</b></p>	<p><b>This person is:</b></p> <p><input type="checkbox"/> applicant only</p> <p><input checked="" type="checkbox"/> applicant and inventor</p> <p><input type="checkbox"/> inventor only (If this check-box is marked, do not fill in below.)</p> <p>Applicant's registration No. with the Office</p>
State (that is, country) of nationality: <b>US</b>	State (that is, country) of residence: <b>US</b>
<p>This person is applicant for the purposes of:    <input type="checkbox"/> all designated States    <input type="checkbox"/> all designated States except the United States of America    <input checked="" type="checkbox"/> the United States of America only    <input type="checkbox"/> the States indicated in the Supplemental Box</p>	

☒ Further applicants and/or (further) inventors are indicated on another continuation sheet.



Sheet No. ...3...

<b>Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)</b> <i>If none of the following sub-boxes is used, this sheet should not be included in the request.</i>	
<b>Name and address:</b> <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i>  <b>Moulton, Brian</b> <b>13455 Century Cove Dr. #325</b> <b>Temple Terrace, FL 33637</b> <b>US</b>	<b>This person is:</b> <input type="checkbox"/> applicant only <input checked="" type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below.)</i>  <b>Applicant's registration No. with the Office</b>
<b>State (that is, country) of nationality:</b> <b>US</b>	<b>State (that is, country) of residence:</b> <b>US</b>
<b>This person is applicant for the purposes of:</b> <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<b>Name and address:</b> <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i>  <b>Rodriguez-Hornedo, Nair</b> <b>1690 Northbrook Dr.</b> <b>Ann Arbor, MI 48103</b> <b>US</b>	<b>This person is:</b> <input type="checkbox"/> applicant only <input checked="" type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below.)</i>  <b>Applicant's registration No. with the Office</b>
<b>State (that is, country) of nationality:</b> <b>US</b>	<b>State (that is, country) of residence:</b> <b>US</b>
<b>This person is applicant for the purposes of:</b> <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input checked="" type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<b>Name and address:</b> <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i>  	<b>This person is:</b> <input type="checkbox"/> applicant only <input type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below.)</i>  <b>Applicant's registration No. with the Office</b>
<b>State (that is, country) of nationality:</b>	<b>State (that is, country) of residence:</b>
<b>This person is applicant for the purposes of:</b> <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<b>Name and address:</b> <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i>  	<b>This person is:</b> <input type="checkbox"/> applicant only <input type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below.)</i>  <b>Applicant's registration No. with the Office</b>
<b>State (that is, country) of nationality:</b>	<b>State (that is, country) of residence:</b>
<b>This person is applicant for the purposes of:</b> <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<b>Name and address:</b> <i>(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)</i>  	
<b>This person is:</b> <input type="checkbox"/> applicant only <input type="checkbox"/> applicant and inventor <input type="checkbox"/> inventor only <i>(If this check-box is marked, do not fill in below.)</i>  <b>Applicant's registration No. with the Office</b>	
<b>State (that is, country) of nationality:</b>	<b>State (that is, country) of residence:</b>
<b>This person is applicant for the purposes of:</b> <input type="checkbox"/> all designated States <input type="checkbox"/> all designated States except the United States of America <input type="checkbox"/> the United States of America only <input type="checkbox"/> the States indicated in the Supplemental Box	
<input type="checkbox"/> Further applicants and/or (further) inventors are indicated on another continuation sheet.	

## No. V DESIGNATION OF STATES

Mark the applicable check-boxes below; at least one must be marked.

The following designations are hereby made under Rule 4.9(a):

## Regional Patent

- ☒ **AP ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZM Zambia, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT (if other kind of protection or treatment desired, specify on dotted line) .....
- ☒ **EA Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ **EP European Patent:** AT Austria, BE Belgium, BG Bulgaria, CH & LI Switzerland and Liechtenstein, CY Cyprus, CZ Czech Republic, DE Germany, DK Denmark, EE Estonia, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, HU Hungary, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, RO Romania, SE Sweden, SI Slovenia, SK Slovakia, TR Turkey, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ **OA OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GQ Equatorial Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired, specify on dotted line) .....

## National Patent (if other kind of protection or treatment desired, specify on dotted line):

- |   |  |   |
|---|--|---|
| <input checked="" type="checkbox"/> AE United Arab Emirates               | <input checked="" type="checkbox"/> HR Croatia                                   | <input checked="" type="checkbox"/> OM Oman                             |
| <input checked="" type="checkbox"/> AG Antigua and Barbuda                | <input checked="" type="checkbox"/> HU Hungary                                   | <input checked="" type="checkbox"/> PG Papua New Guinea                 |
| <input checked="" type="checkbox"/> AL Albania                            | <input checked="" type="checkbox"/> ID Indonesia                                 | <input checked="" type="checkbox"/> PH Philippines                      |
| <input checked="" type="checkbox"/> AM Armenia                            | <input checked="" type="checkbox"/> IL Israel                                    | <input checked="" type="checkbox"/> PL Poland                           |
| <input checked="" type="checkbox"/> AT Austria                            | <input checked="" type="checkbox"/> IN India                                     | <input checked="" type="checkbox"/> PT Portugal                         |
| <input checked="" type="checkbox"/> AU Australia                          | <input checked="" type="checkbox"/> IS Iceland                                   | <input checked="" type="checkbox"/> RO Romania                          |
| <input checked="" type="checkbox"/> AZ Azerbaijan                         | <input checked="" type="checkbox"/> JP Japan                                     | <input checked="" type="checkbox"/> RU Russian Federation               |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina             | <input checked="" type="checkbox"/> KE Kenya                                     | <input checked="" type="checkbox"/> SC Seychelles                       |
| <input checked="" type="checkbox"/> BB Barbados                           | <input checked="" type="checkbox"/> KG Kyrgyzstan                                | <input checked="" type="checkbox"/> SD Sudan                            |
| <input checked="" type="checkbox"/> BG Bulgaria                           | <input checked="" type="checkbox"/> KP Democratic People's Republic of Korea     | <input checked="" type="checkbox"/> SE Sweden                           |
| <input checked="" type="checkbox"/> BR Brazil                             | <input checked="" type="checkbox"/> KR Republic of Korea                         | <input checked="" type="checkbox"/> SG Singapore                        |
| <input checked="" type="checkbox"/> BY Belarus                            | <input checked="" type="checkbox"/> KZ Kazakhstan                                | <input checked="" type="checkbox"/> SK Slovakia                         |
| <input checked="" type="checkbox"/> BZ Belize                             | <input checked="" type="checkbox"/> LC Saint Lucia                               | <input checked="" type="checkbox"/> SL Sierra Leone                     |
| <input checked="" type="checkbox"/> CA Canada                             | <input checked="" type="checkbox"/> LK Sri Lanka                                 | <input checked="" type="checkbox"/> SY Syrian Arab Republic             |
| <input checked="" type="checkbox"/> CH & LI Switzerland and Liechtenstein | <input checked="" type="checkbox"/> LR Liberia                                   | <input checked="" type="checkbox"/> TJ Tajikistan                       |
| <input checked="" type="checkbox"/> CN China                              | <input checked="" type="checkbox"/> LS Lesotho                                   | <input checked="" type="checkbox"/> TM Turkmenistan                     |
| <input checked="" type="checkbox"/> CO Colombia                           | <input checked="" type="checkbox"/> LT Lithuania                                 | <input checked="" type="checkbox"/> TN Tunisia                          |
| <input checked="" type="checkbox"/> CR Costa Rica                         | <input checked="" type="checkbox"/> LU Luxembourg                                | <input checked="" type="checkbox"/> TR Turkey                           |
| <input checked="" type="checkbox"/> CU Cuba                               | <input checked="" type="checkbox"/> LV Latvia                                    | <input checked="" type="checkbox"/> TT Trinidad and Tobago              |
| <input checked="" type="checkbox"/> CZ Czech Republic                     | <input checked="" type="checkbox"/> MA Morocco                                   | <input checked="" type="checkbox"/> TZ United Republic of Tanzania      |
| <input checked="" type="checkbox"/> DE Germany                            | <input checked="" type="checkbox"/> MD Republic of Moldova                       | <input checked="" type="checkbox"/> UA Ukraine                          |
| <input checked="" type="checkbox"/> DK Denmark                            | <input checked="" type="checkbox"/> MG Madagascar                                | <input checked="" type="checkbox"/> UG Uganda                           |
| <input checked="" type="checkbox"/> DM Dominica                           | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia | <input checked="" type="checkbox"/> US United States of America         |
| <input checked="" type="checkbox"/> DZ Algeria                            | <input checked="" type="checkbox"/> MN Mongolia                                  | <input checked="" type="checkbox"/> UZ Uzbekistan                       |
| <input checked="" type="checkbox"/> EC Ecuador                            | <input checked="" type="checkbox"/> MW Malawi                                    | <input checked="" type="checkbox"/> VC Saint Vincent and the Grenadines |
| <input checked="" type="checkbox"/> EE Estonia                            | <input checked="" type="checkbox"/> MX Mexico                                    | <input checked="" type="checkbox"/> VN Viet Nam                         |
| <input checked="" type="checkbox"/> ES Spain                              | <input checked="" type="checkbox"/> MZ Mozambique                                | <input checked="" type="checkbox"/> YU Serbia and Montenegro            |
| <input checked="" type="checkbox"/> FI Finland                            | <input checked="" type="checkbox"/> NI Nicaragua                                 | <input checked="" type="checkbox"/> ZA South Africa                     |
| <input checked="" type="checkbox"/> GB United Kingdom                     | <input checked="" type="checkbox"/> NO Norway                                    | <input checked="" type="checkbox"/> ZM Zambia                           |
| <input checked="" type="checkbox"/> GD Grenada                            | <input checked="" type="checkbox"/> NZ New Zealand                               | <input checked="" type="checkbox"/> ZW Zimbabwe                         |
| <input checked="" type="checkbox"/> GE Georgia                            |  |   |
| <input checked="" type="checkbox"/> GH Ghana                              |  |   |
| <input checked="" type="checkbox"/> GM Gambia                             |  |   |

Check-boxes below reserved for designating States which have become party to the PCT after issuance of this sheet:

☐ ..... ☐ ..... ☐ .....

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)



**Supplemental Box***If the Supplemental Box is not used, this sheet should not be included in the request.*

1. *If, in any of the Boxes, except Boxes Nos. VIII(i) to (v) for which a special continuation box is provided, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No...." (indicate the number of the Box) and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:*
  - (i) *if more than two persons are to be indicated as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;*
  - (ii) *if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;*
  - (iii) *if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;*
  - (iv) *if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;*
  - (v) *if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;*
  - (vi) *if, in Box No. VI, there are more than five earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI.*
2. *If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.*

**Continuation of Box IV:**

SALIWANCHIK, David R.; LLOYD, Jeff; PACE, Doran R.; SANDERS, Jay M.; KYLE, Jean; PARKER, James S.; LADWIG, Glenn P.; EFRON, Margaret H.; and DANIELS, Gwendolyn, L.

THE ABOVE ARE MEMBERS OF THE FIRM OF SALIWANCHIK, LLOYD & SALIWANCHIK, AND HAVE THE SAME ADDRESS AS THE INDIVIDUAL LISTED IN BOX IV.

**Continuation of Box VI.**

This application claims the benefit of US Provisional Patent Application 60/451,213, filed February 28, 2003; US Provisional Patent Application 60/463,962, filed April 18, 2003; and US Provisional Patent Application 60/487,064, filed July 11, 2003. This application is also a Continuation-In-Part of 10/378,956, filed March 3, 2003 which claims the benefit of US Provisional Patent Application 60/360,768, filed March 1, 2002.

Sheet No. ...6...

**Box No. VI PRIORITY CLAIM**

The priority of the following earlier application(s) is hereby claimed:

Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country or Member of WTO	regional application:* regional Office	international application: receiving Office
item (1) 28/02/2003 (28 Feb. 2003)	60/451,213	US		
item (2) 11/07/2003 (11 Jul. 2003)	60/487,064	US		
item (3) 18/04/2003 (18 Apr. 2003)	60/463,962	US		
item (4) 03/03/2003 (03 Mar. 2003)	10/378,956	US		
item (5)				

☒ Further priority claims are indicated in the Supplemental Box.The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (*only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office*) identified above as:
☒ all items   
 ☐ item (1)   
 ☐ item (2)   
 ☐ item (3)   
 ☐ item (4)   
 ☐ item (5)   
 ☐ other, see Supplemental Box

\* Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)): . . . .

.....

**Box No. VII INTERNATIONAL SEARCHING AUTHORITY**Choice of International Searching Authority (ISA) (*if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used*):

ISA / EP .....

Request to use results of earlier search; reference to that search (*if an earlier search has been carried out by or requested from the International Searching Authority*):

Date (day/month/year)

Number

Country (or regional Office)

**Box No. VIII DECLARATIONS**The following declarations are contained in Boxes Nos. VIII (i) to (v) (*mark the applicable check-boxes below and indicate in the right column the number of each type of declaration*):Number of  
declarations

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Box No. VIII (i)   | Declaration as to the identity of the inventor   | : |
| <input type="checkbox"/> Box No. VIII (ii)  | Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent             | : |
| <input type="checkbox"/> Box No. VIII (iii) | Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application | : |
| <input type="checkbox"/> Box No. VIII (iv)  | Declaration of inventorship (only for the purposes of the designation of the United States of America)                               | : |
| <input type="checkbox"/> Box No. VIII (v)   | Declaration as to non-prejudicial disclosures or exceptions to lack of novelty   | : |



Sheet No. 7

Box No. IX CHECK LIST; LANGUAGE OF FILING																																			
<p>This international application contains:</p> <p>(a) in paper form, the following number of sheets :</p> <p>request (including declaration sheets) : 7</p> <p>description (excluding sequence listings and/or tables related thereto) : 416</p> <p>claims : 16</p> <p>abstract : 1</p> <p>drawings : 46</p> <p><b>Sub-total number of sheets : 486</b></p> <p>sequence listings : </p> <p>tables related thereto : </p> <p><i>(for both, actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (c) below)</i></p> <p><b>Total number of sheets : 486</b></p> <p>(b) <input type="checkbox"/> only in computer readable form (Section 801(a)(i))</p> <p>(i) <input type="checkbox"/> sequence listings</p> <p>(ii) <input type="checkbox"/> tables related thereto</p> <p>(c) <input type="checkbox"/> also in computer readable form (Section 801(a)(ii))</p> <p>(i) <input type="checkbox"/> sequence listings</p> <p>(ii) <input type="checkbox"/> tables related thereto</p> <p><b>Type and number of carriers</b> (diskette, CD-ROM, CD-R or other) on which are contained the</p> <p><input type="checkbox"/> sequence listings: .....</p> <p><input type="checkbox"/> tables related thereto: .....</p> <p><i>(additional copies to be indicated under items 9(ii) and/or 10(ii), in right column)</i></p>	<p>This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item):</p> <table style="width: 100%;"> <tr> <td style="width: 80%;">1. <input checked="" type="checkbox"/> fee calculation sheet</td> <td style="width: 20%; text-align: right;">: 1</td> </tr> <tr> <td>2. <input type="checkbox"/> original separate power of attorney</td> <td style="text-align: right;">:</td> </tr> <tr> <td>3. <input type="checkbox"/> original general power of attorney</td> <td style="text-align: right;">:</td> </tr> <tr> <td>4. <input type="checkbox"/> copy of general power of attorney; reference number, if any: .....</td> <td style="text-align: right;">:</td> </tr> <tr> <td>5. <input type="checkbox"/> statement explaining lack of signature</td> <td style="text-align: right;">:</td> </tr> <tr> <td>6. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): .....</td> <td style="text-align: right;">:</td> </tr> <tr> <td>7. <input type="checkbox"/> translation of international application into (language): .....</td> <td style="text-align: right;">:</td> </tr> <tr> <td>8. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material</td> <td style="text-align: right;">:</td> </tr> <tr> <td>9. <input type="checkbox"/> sequence listings in computer readable form (indicate type and number of carriers)</td> <td style="text-align: right;">:</td> </tr> <tr> <td>    (i) <input type="checkbox"/> copy submitted for the purposes of international search under Rule 13ter only (and not as part of the international application):</td> <td style="text-align: right;">:</td> </tr> <tr> <td>    (ii) <input type="checkbox"/> (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter</td> <td style="text-align: right;">:</td> </tr> <tr> <td>    (iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the sequence listings mentioned in left column</td> <td style="text-align: right;">:</td> </tr> <tr> <td>10. <input type="checkbox"/> tables in computer readable form related to sequence listings (indicate type and number of carriers)</td> <td style="text-align: right;">:</td> </tr> <tr> <td>    (i) <input type="checkbox"/> copy submitted for the purposes of international search under Section 802(b-quater) only (and not as part of the international application)</td> <td style="text-align: right;">:</td> </tr> <tr> <td>    (ii) <input type="checkbox"/> (only where check-box (b)(ii) or (c)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quater)</td> <td style="text-align: right;">:</td> </tr> <tr> <td>    (iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the tables mentioned in left column</td> <td style="text-align: right;">:</td> </tr> <tr> <td>11. <input checked="" type="checkbox"/> other (specify): Transmittal Letter to the US/RO .....</td> <td style="text-align: right;">: 1</td> </tr> </table>	1. <input checked="" type="checkbox"/> fee calculation sheet	: 1	2. <input type="checkbox"/> original separate power of attorney	:	3. <input type="checkbox"/> original general power of attorney	:	4. <input type="checkbox"/> copy of general power of attorney; reference number, if any: .....	:	5. <input type="checkbox"/> statement explaining lack of signature	:	6. <input type="checkbox"/> priority document(s) identified in Box No. VI as item(s): .....	:	7. <input type="checkbox"/> translation of international application into (language): .....	:	8. <input type="checkbox"/> separate indications concerning deposited microorganism or other biological material	:	9. <input type="checkbox"/> sequence listings in computer readable form (indicate type and number of carriers)	:	(i) <input type="checkbox"/> copy submitted for the purposes of international search under Rule 13ter only (and not as part of the international application):	:	(ii) <input type="checkbox"/> (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter	:	(iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the sequence listings mentioned in left column	:	10. <input type="checkbox"/> tables in computer readable form related to sequence listings (indicate type and number of carriers)	:	(i) <input type="checkbox"/> copy submitted for the purposes of international search under Section 802(b-quater) only (and not as part of the international application)	:	(ii) <input type="checkbox"/> (only where check-box (b)(ii) or (c)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quater)	:	(iii) <input type="checkbox"/> together with relevant statement as to the identity of the copy or copies with the tables mentioned in left column	:	11. <input checked="" type="checkbox"/> other (specify): Transmittal Letter to the US/RO .....	: 1
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<p>Figure of the drawings which should accompany the abstract: None</p>	<p>Language of filing of the international application: English</p>																																		
<p><b>Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE</b></p> <p><i>Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).</i></p> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="flex: 1;"> <p>Frank C. Eisenschenk, Ph.D.</p> </div> <div style="flex: 1; text-align: right;"> <p>September 4, 2003</p> <p>Date</p> </div> </div>																																			

For receiving Office use only	
<p>1. Date of actual receipt of the purported international application:</p> <p style="text-align: center; font-weight: bold; font-size: 1.2em;">PTD2 Rec'd PCT/PTO 04 SEP 2003</p>	<p>2. Drawings:</p> <p><input type="checkbox"/> received:</p> <p><input type="checkbox"/> not received:</p>
<p>3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:</p>	
<p>4. Date of timely receipt of the required corrections under PCT Article 11(2):</p>	
<p>5. International Searching Authority (if two or more are competent): ISA/EP</p>	<p>6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid</p>

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# PCT

## FEE CALCULATION SHEET

Annex to the Request

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PCT/US 03/27772

International Application No.

04 SEP 2003 (04.09.03)

Date stamp of the receiving Office

Applicant's or agent's  
file reference

TPI-350

Applicant

TRANSFORM PHARMACEUTICALS, INC.

### CALCULATION OF PRESCRIBED FEES

1. TRANSMITTAL FEE . . . . . \$240.00 [T]

2. SEARCH FEE . . . . . \$1,119.00 [S]

International search to be carried out by EP  
(If two or more International Searching Authorities are competent to carry out the international search, indicate the name of the Authority which is chosen to carry out the international search.)

3. INTERNATIONAL FEE

Basic Fee

Where items (b) and/or (c) of Box No. IX apply, enter Sub-total number of sheets } 486  
Where items (b) and (c) of Box No. IX do not apply, enter Total number of sheets }

[b1] first 30 sheets . . . . . \$476.00 [b1]

[b2] 456 x \$12.00 = \$5,472.00 [b2]  
number of sheets in excess of 30 fee per sheet

[b3] additional component (only if sequence listings and/or tables related thereto are filed in computer readable form under Section 801(a)(i), or both in that form and on paper, under Section 801(a)(ii):

400 x 0 = \$0.00 [b3]  
fee per sheet

Add amounts entered at b1, b2 and b3 and enter total at B . . . . . \$5,948.00 [B]

Designation Fees

The international application contains 97 designations.

5 x 104.00 = \$520.00 [D]  
number of designation fees payable (maximum 5) amount of designation fee

Add amounts entered at B and D and enter total at I . . . . . \$6,468.00 [I]

(Applicants from certain States are entitled to a reduction of 75% of the international fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 25% of the sum of the amounts entered at B and D.)

4. FEE FOR PRIORITY DOCUMENT (if applicable) . . . . . \$80.00 [P]

5. TOTAL FEES PAYABLE . . . . . \$7,907.00

Add amounts entered at T, S, I and P, and enter total in the TOTAL box

TOTAL

☐ The designation fees are not paid at this time.

### MODE OF PAYMENT

☒ authorization to charge deposit account (see below)

☐ postal money order

☐ cash

☐ coupons

☐ cheque

☐ bank draft

☐ revenue stamps

☐ other (specify):

### AUTHORIZATION TO CHARGE (OR CREDIT) DEPOSIT ACCOUNT

(This mode of payment may not be available at all receiving Offices)

☒ Authorization to charge the total fees indicated above.

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Receiving Office: RO/ US

Deposit Account No.: 19-0065

Date: September 4, 2003

Name: Frank C. Eisenschenk

Signature: Frank C. Eisenschenk



## **Pharmaceutical Co-Crystal Compositions**

### **INCORPORATION BY REFERENCE**

The content of US Patent Application No. 60/451,213 filed on February 28, 2003 is incorporated herein by reference in its entirety.

### **FIELD OF THE INVENTION**

The present invention relates to co-crystal API-containing compositions, pharmaceutical compositions comprising such APIs, and methods for preparing the same.

### **BACKGROUND OF THE INVENTION**

Active pharmaceutical ingredients (API or APIs (plural)) in pharmaceutical compositions can be prepared in a variety of different forms. Such APIs can be prepared so as to have a variety of different chemical forms including chemical derivatives or salts. Such APIs can also be prepared to have different physical forms. For example, the APIs may be amorphous, may have different crystalline polymorphs, or may exist in different solvation or hydration states. By varying the form of an API, it is possible to vary the physical properties thereof. For example, crystalline polymorphs typically have different solubilities from one another, such that a more thermodynamically stable polymorph is less soluble than a less thermodynamically stable polymorph. Pharmaceutical polymorphs can also differ in properties such as shelf-life, bioavailability, morphology, vapour pressure, density, colour, and compressibility. Accordingly, variation of the crystalline state of an API is one of many ways in which to modulate the physical properties thereof.

It would be advantageous to have new forms of these APIs that have improved properties, in particular, as oral formulations. Specifically, it is desirable to identify improved forms of APIs that exhibit significantly improved properties including increased aqueous solubility and stability. Further, it is desirable to improve the processability, or preparation of pharmaceutical formulations. For example, needle-like crystal forms or habits of APIs can cause aggregation, even in compositions where the API is mixed with other substances, such that a non-uniform mixture is obtained. It is also desirable to increase the dissolution rate of API-containing pharmaceutical compositions in water, increase the bioavailability of orally-

administered compositions, and provide a more rapid onset to therapeutic effect. It is also desirable to have a form of the API which, when administered to a subject, reaches a peak plasma level faster, has a longer lasting therapeutic plasma concentration, and higher overall exposure when compared to equivalent amounts of the API in its presently-known form.

### SUMMARY OF THE INVENTION

It has now been found that new co-crystalline forms of APIs can be obtained which improve the properties of APIs as compared to such APIs in a non-co-crystalline state (free acid, free base, zwitter ions, salts, etc.).

Accordingly, in a first aspect, the present invention provides a co-crystal pharmaceutical composition comprising an API compound and a co-crystal forming compound, such that the API and co-crystal forming compound are capable of co-crystallizing from a solid or solution phase under crystallization conditions.

Another aspect of the present invention provides a process for the production of a pharmaceutical composition, which process comprises:

- (1) providing an API which has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;
- (2) providing a co-crystal forming compound which has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;
- (3) grinding, heating or contacting in solution the API with the co-crystal forming compound under crystallization conditions;
- (4) isolating co-crystals formed thereby; and

- (5) incorporating the co-crystals into a pharmaceutical composition.

A further aspect of the present invention provides a process for the production of a pharmaceutical composition, which comprises:

- (1) grinding, heating or contacting in solution an API compound with a co-crystal forming compound, under crystallization conditions, so as to form a solid phase;
- (2) isolating co-crystals comprising the API and the co-crystal forming compound; and
- (3) incorporating the co-crystals into a pharmaceutical composition.

In a further aspect, the present invention provides a process for the production of a pharmaceutical composition, which comprises:

- (1) providing (i) an API or a plurality of different APIs, and (ii) a co-crystal forming compound or a plurality of different co-crystal forming compounds, wherein at least one of the APIs and the co-crystal forming compounds is provided as a plurality thereof;
- (2) isolating co-crystals comprising the API and the co-crystal forming compound; and
- (3) incorporating the co-crystals into a pharmaceutical composition.

#### Solubility Modulation

In a further aspect, the present invention provides a process for modulating the solubility of an API, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Dissolution Modulation

In a further aspect, the present invention provides a process for modulating the dissolution of an API, whereby the aqueous dissolution rate or the dissolution rate in



simulated gastric fluid or in simulated intestinal fluid, or in a solvent or plurality of solvents is increased or decreased, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

In one embodiment, the dissolution of the API is increased.

#### Bioavailability Modulation

In a further aspect, the present invention provides a process for modulating the bioavailability of an API, whereby the AUC is increased, the time to  $T_{\max}$  is reduced, the length of time the concentration of the API is above  $\frac{1}{2} T_{\max}$  is increased, or  $C_{\max}$  is increased, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Dose Response Modulation

In a further aspect the present invention provides a process for improving the linearity of a dose response of an API, which process comprises:

- (1) grinding, heating, or contacting in solution an API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Increased Stability

In a still further aspect the present invention provides a process for improving the stability of a pharmaceutical salt, which process comprises:

- (1) grinding, heating or contacting in solution the pharmaceutical salt with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Difficult to Salt or Unsaltable Compounds

In a still further aspect the present invention provides a process for making co-crystals of difficult to salt or unsaltable APIs, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Decreasing Hygroscopicity

In a still further aspect the present invention provides a method for decreasing the hygroscopicity of an API, which method comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Crystallizing Amorphous Compounds

In a still further embodiment aspect the present invention provides a process for crystallizing an amorphous compound, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Decreasing Form Diversity

In a still further embodiment aspect the present invention provides a process for reducing the form diversity of an API, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Morphology Modulation

In a still further embodiment aspect the present invention provides a process for modifying the morphology of an API, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

In a further aspect, the present invention provides a co-crystal composition comprising a co-crystal, wherein said co-crystal comprises an API compound and a co-crystal forming compound. In further embodiments the co-crystal has an improved property as compared to the free form (including a free acid, free base, zwitter ion, hydrate, solvate, etc.) or a salt (which includes salt hydrates and solvates). In further embodiments, the improved property is selected from the group consisting of: increased solubility, increased dissolution, increased bioavailability, increased dose response, decreased hygroscopicity, a crystalline form of a normally amorphous compound, a crystalline form of a difficult to salt or unsalt compound, decreased form diversity, more desired morphology, or other property described herein.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 PXRD pattern for a co-crystal of carbamazepine and saccharin (Form I)

Fig. 2 DSC thermogram for a co-crystal of carbamazepine and saccharin (Form I)

Fig. 3 PXRD pattern for a co-crystal of carbamazepine and nicotinamide (Form I)



Fig. 4 DSC thermogram for a co-crystal of carbamazepine and nicotinamide  
(Form I)

Fig. 5 PXRD pattern for a co-crystal of carbamazepine and trimesic acid  
(Form I)

Fig. 6 PXRD pattern for a co-crystal of topiramate and 18-crown-6

Fig. 7 DSC thermogram for a co-crystal of topiramate and 18-crown-6

Fig. 8 PXRD pattern for a co-crystal of olanzapine and nicotinamide (Form I)

Fig. 9 DSC thermogram for a co-crystal of olanzapine and nicotinamide (Form  
I)

Fig. 10 PXRD pattern for a co-crystal of celecoxib and 18-crown-6

Fig. 11 DSC thermogram for a co-crystal of celecoxib and 18-crown-6

Fig. 12 PXRD pattern for a co-crystal of itraconazole and succinic acid

Fig. 13 DSC thermogram for a co-crystal of itraconazole and succinic acid

Fig. 14 PXRD pattern for a co-crystal of itraconazole and fumaric acid

Fig. 15 DSC thermogram for a co-crystal of itraconazole and fumaric acid

Fig. 16 PXRD pattern for a co-crystal of itraconazole and tartaric acid

Fig. 17 DSC thermogram for a co-crystal of itraconazole and tartaric acid

Fig. 18 PXRD pattern for a co-crystal of itraconazole and malic acid

Fig. 19 DSC thermogram for a co-crystal of itraconazole and malic acid

Fig. 20 PXRD pattern for a co-crystal of itraconazoleHCl and tartaric acid

Fig. 21 DSC thermogram for a co-crystal of itraconazoleHCl and tartaric acid

Fig. 22 PXRD pattern for a co-crystal of modafinil and malonic acid

Fig. 23 PXRD pattern for a co-crystal of modafinil and benzamide

Fig. 24 PXRD pattern for a co-crystal of modafinil and mandelic acid

Fig. 25 PXRD pattern for a co-crystal of modafinil and glycolic acid

Fig. 26 PXRD pattern for a co-crystal of modafinil and fumaric acid

Fig. 27 Dissolution profile for a co-crystal of celecoxib:nicotinamide vs.  
celecoxib free acid

Fig. 28 Dissolution profile for co-crystals of itraconazole:succinic acid,  
itraconazole:tartaric acid and itraconazole:malic acid vs. itraconazole free base

Fig. 29 Hygroscopicity profile for a co-crystal of celecoxib:nicotinamide vs.  
celecoxib sodium

Fig. 30 PXRD pattern for a co-crystal of olanzapine and nicotinamide (Form  
II)

Fig. 31 PXRD pattern for a co-crystal of olanzapine and nicotinamide (Form III)

Fig. 32A-D Packing diagrams and crystal structure of olanzapine and nicotinamide (Form III)

Fig. 33 DSC thermogram for a co-crystal of 5-fluorouracil and urea

Fig. 34 TGA thermogram for a co-crystal of 5-fluorouracil and urea

Fig. 35 Raman spectrum for a co-crystal of 5-fluorouracil and urea

Fig. 36 PXRD pattern for a co-crystal of 5-fluorouracil and urea

Fig. 37 PXRD pattern for a co-crystal of hydrochlorothiazide and nicotinic acid

Fig. 38 PXRD pattern for a co-crystal of hydrochlorothiazide and 18-crown-6

Fig. 39 PXRD pattern for a co-crystal of hydrochlorothiazide and piperazine

Fig. 40 DSC thermogram for a co-crystal of modafinil and malonic acid

Fig. 41 TGA thermogram for a co-crystal of modafinil and malonic acid

Fig. 42 Raman spectrum for a co-crystal of modafinil and malonic acid

Fig. 43 PXRD pattern for a co-crystal of modafinil and maleic acid

Fig. 44A-B An acetaminophen 1-D polymeric chain and a co-crystal of acetaminophen and 4,4'-bipyridine, respectively.

Fig. 45A-B Pure phenytoin and a co-crystal with phenytoin and pyridone, respectively.

Fig. 46A-D Pure aspirin and the corresponding crystal structure are shown in Figures 46A and 46B, respectively. Figures 46C and 46D show the supramolecular entity containing the synthon and corresponding co-crystal of aspirin and 4,4'-bipyridine, respectively.

Fig. 47A-D Pure ibuprofen and the corresponding crystal structure are shown in Figures 7A and 7B, respectively. Figures 7C and 7D show the supramolecular entity containing the synthon and corresponding co-crystal of ibuprofen and 4,4'-bipyridine, respectively.

Fig. 48A-D Pure flurbiprofen and the corresponding crystal structure are shown in Figures 48A and 48B, respectively. Figures 5C and 5D show the supramolecular synthon and corresponding co-crystal of flurbiprofen and 4,4'-bipyridine, respectively.

Fig. 49A-B The supramolecular entity containing the synthon and the corresponding co-crystal structure of flurbiprofen and trans-1,2-bis(4-pyridyl)ethylene, respectively.

Fig. 50A-B The crystal structure of pure carbamazepine and the co-crystal structure of carbamazepine and *p*-phthalaldehyde, respectively.

Fig. 51 The co-crystal structure of carbamazepine and nicotinamide (Form II).

Fig. 52 The co-crystal structure of carbamazepine and saccharin (Form II).

Fig. 53A-C The chemical structures of ibuprofen, flurbiprofen, and aspirin, respectively.

Fig. 54A-B The crystal structure of carbamazepine and the co-crystal structure of carbamazepine and 2,6-pyridinedicarboxylic acid, respectively.

Fig. 55A-B The crystal structure of carbamazepine and the co-crystal structure of carbamazepine and 5-nitroisophthalic acid, respectively.

Fig. 56A-B The crystal structure of carbamazepine and the co-crystal structure of carbamazepine and 1,3,5,7-adamantanetetracarboxylic acid, respectively.

Fig. 57A-B The crystal structure of carbamazepine and the co-crystal structure of carbamazepine and benzoquinone, respectively.

Fig. 58A-B The crystal structure of carbamazepine and the co-crystal structure of carbamazepine and trimesic acid (Form II), respectively.

Fig. 59 PXRD diffractogram for a co-crystal of celecoxib and nicotinamide

Fig. 60 DSC thermogram for a co-crystal of celecoxib and nicotinamide

Fig. 61 TGA thermogram for a co-crystal of celecoxib and nicotinamide

Fig. 62 Raman spectrum for a co-crystal of celecoxib and nicotinamide

Fig. 63 Hydrogen-bonding motifs observed in co-crystals

### DETAILED DESCRIPTION OF THE INVENTION

The term "co-crystal" as used herein means a crystalline material comprised of two or more unique solids at room temperature, each containing distinctive physical characteristics, such as structure, melting point and heats of fusion, with the exception that, if specifically stated, the API may be a liquid at room temperature. The co-crystals of the present invention comprise a co-crystal former H-bonded to an API. The co-crystal former may be H-bonded directly to the API or may be H-bonded to an additional molecule which is bound to the API. The additional molecule may be H-bonded to the API or bound ionically or covalently to the API. The additional



molecule could also be a different API. Solvates of API compounds that do not further comprise a co-crystal forming compound are not co-crystals according to the present invention. The co-crystals may however, include one or more solvate molecules in the crystalline lattice. That is, solvates of co-crystals, or a co-crystal further comprising a solvent or compound that is a liquid at room temperature, is included in the present invention, but crystalline material comprised of only one solid and one or more liquids (at room temperature) are not included in the present invention, with the previously noted exception of specifically stated liquid APIs. The co-crystals may also be a co-crystal between a co-crystal former and a salt of an API, but the API and the co-crystal former of the present invention are constructed or bonded together through hydrogen bonds. Other modes of molecular recognition may also be present including, pi-stacking, guest-host complexation and van der Waals interactions. Of the interactions listed above, hydrogen-bonding is the dominant interaction in the formation of the co-crystal, (and a required interaction according to the present invention) whereby a non-covalent bond is formed between a hydrogen bond donor of one of the moieties and a hydrogen bond acceptor of the other. Hydrogen bonding can result in several different intermolecular configurations. For example, hydrogen bonds can result in the formation of dimers, linear chains, or cyclic structures. These configurations can further include extended (two-dimensional) hydrogen bond networks and isolated triads (Fig. 63). An alternative embodiment provides for a co-crystal wherein the co-crystal former is a second API. In another embodiment, the co-crystal former is not an API. In another embodiment the co-crystal comprises two co-crystal formers. Co-crystals may also be formed where the API is a "guest" molecule in regions of a crystalline lattice formed by the co-crystal forming compound, thus forming an inclusion complex. For purposes of the present invention, the chemical and physical properties of an API in the form of a co-crystal may be compared to a reference compound that is the same API in a different form. The reference compound may be specified as a free form, or more specifically, a free acid, free base, or zwitter ion; a salt, or more specifically for example, an inorganic base addition salt such as sodium, potassium, lithium, calcium, magnesium, ammonium, aluminum salts or organic base addition salts, or an inorganic acid addition salts such as HBr, HCl, sulfuric, nitric, or phosphoric acid addition salts or an organic acid addition salt such as acetic, propionic, pyruvic, malonic, succinic, malic, maleic, fumaric, tartaric, citric, benzoic, methanesulfonic,

ethanesulfonic, stearic or lactic acid addition salt; an anhydrate or hydrate of a free form or salt, or more specifically, for example, a hemihydrate, monohydrate, dihydrate, trihydrate, quadrahydrate, pentahydrate; or a solvate of a free form or salt. The reference compound may also be specified as crystalline or amorphous.

According to the present invention, the co-crystals can include an acid addition salt or base addition salt of an API. Acid addition salts include, but are not limited to, inorganic acids such as hydrochloric acid, hydrobromic acid, sulfuric acid, nitric acid, and phosphoric acid, and organic acids such as acetic acid, propionic acid, hexanoic acid, heptanoic acid, cyclopentanepropionic acid, glycolic acid, pyruvic acid, lactic acid, malonic acid, succinic acid, malic acid, maleic acid, fumaric acid, tartatic acid, citric acid, benzoic acid, o-(4-hydroxybenzoyl)benzoic acid, cinnamic acid, mandelic acid, methanesulfonic acid, ethanesulfonic acid, 1,2-ethanedisulfonic acid, 2-hydroxyethanesulfonic acid, benzenesulfonic acid, p-chlorobenzenesulfonic acid, 2-naphthalenesulfonic acid, p-toluenesulfonic acid, camphorsulfonic acid, 4-methylbicyclo[2.2.2]oct-2-ene-1-carboxylic acid, glucoheptonic acid, 4,4'-methylenebis(3-hydroxy-2-ene-1-carboxylic acid), 3-phenylpropionic acid, trimethylacetic acid, tertiary butylacetic acid, lauryl sulfuric acid, gluconic acid, glutaric acid, hydroxynaphthoic acid, salicylic acid, stearic acid, and muconic acid. Base addition salts include, but are not limited to, inorganic bases such as sodium, potassium, lithium, ammonium, calcium and magnesium salts, and organic bases such as primary, secondary and tertiary amines (e.g. isopropylamine, trimethyl amine, diethyl amine, tri(iso-propyl) amine, tri(n-propyl) amine, ethanolamine, 2-dimethylaminoethanol, tromethamine, lysine, arginine, histidine, caffeine, procaine, hydrabamine, choline, betaine, ethylenediamine, glucosamine, N-alkylglucamines, theobromine, purines, piperazine, piperidine, morpholine, and N-ethylpiperidine).

The ratio of API to co-crystal former may be stoichiometric or non-stoichiometric according to the present invention. For example, 1:1, 1:1.5 and 1:2 ratios of API:co-crystal former are acceptable.

It has surprisingly been found that when an API and a selected co-crystal forming compound are allowed to form co-crystals, the resulting co-crystals give rise to improved properties of the API, as compared to the API in a free form (including free acids, free bases, and zwitter ions, hydrates, solvates, etc.), or an acid or base salt thereof particularly with respect to: solubility, dissolution, bioavailability, stability, C<sub>max</sub>, T<sub>max</sub>, processability, longer lasting therapeutic plasma concentration,

hygroscopicity, crystallization of amorphous compounds, decrease in form diversity (including polymorphism and crystal habit), change in morphology or crystal habit, etc. For example, a co-crystal form of an API is particularly advantageous where the original API is insoluble or sparingly soluble in water. Additionally, the co-crystal properties conferred upon the API are also useful because the bioavailability of the API can be improved and the plasma concentration and/or serum concentration of the API can be improved. This is particularly advantageous for orally-administrable formulations. Moreover, the dose response of the API can be improved, for example by increasing the maximum attainable response and/or increasing the potency of the API by increasing the biological activity per dosing equivalent.

Accordingly, in a first aspect, the present invention provides a pharmaceutical composition comprising a co-crystal of an API and a co-crystal forming compound, such that the API and co-crystal forming compound are capable of co-crystallizing from a solution phase under crystallization conditions or from the solid-state, for example, through grinding or heating. In another aspect, the API has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine and a co-crystal forming compound which has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine, or a functional group in a Table herein, such that the API and co-crystal forming compound are capable of co-crystallizing from a solution phase under crystallization conditions.

The co-crystals of the present invention are formed where the API and co-crystal forming compound are bonded together through hydrogen bonds. Other non-



covalent interactions, including pi-stacking and van der Waals interactions, may also be present.

In one embodiment, the co-crystal former is selected from the co-crystal formers of Table I and Table II. In other embodiments, the co-crystal former of Table I is specified as a Class 1, Class 2, or Class 3 co-crystal former (see column labeled "class" Table I). In another embodiment, the difference in  $pK_a$  value of the co-crystal former and the API is less than 2. In other embodiments, the difference in  $pK_a$  values of the co-crystal former and API is less than 3, less than 4, less than 5, between 2 and 3, between 3 and 4, or between 4 and 5. Table I lists multiple  $pK_a$  values for co-crystal formers having multiple functionalities. It is readily apparent to one skilled in the art the particular functional group corresponding to a particular  $pK_a$  value.

In another embodiment the particular functional group of a co-crystal former interacting with the API is specified (see for example Table I, columns labeled "Functionality" and "Molecular Structure" and the column of Table II labeled "Co-Crystal Former Functional Group"). In a further embodiment the functional group of the API interacting with the co-crystal former functional group is specified (see, for example, Tables II and III).

In another embodiment, the co-crystal comprises more than one co-crystal former. For example, two, three, four, five, or more co-crystal formers can be incorporated in a co-crystal with an API. Co-crystals which comprise two or more co-crystal formers and an API are bound together via hydrogen bonds. In one embodiment, incorporated co-crystal formers are hydrogen bonded to the API molecules. In another embodiment, co-crystal formers are hydrogen bonded to either the API molecules or the incorporated co-crystal formers.

In a further embodiment, several co-crystal formers can be contained in a single compartment, or kit, for ease in screening an API for potential co-crystal species. The co-crystal kit can comprise 5, 10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100, or more of the co-crystal formers in Tables I and II. The co-crystal formers are in solid form and in an array of individual reaction vials such that individual co-crystal formers can be tested with one or more APIs by one or more crystallization methods or multiple co-crystal formers can be easily tested against one or more compounds by one or more crystallization methods. The crystallization methods include, but are not limited to, melt recrystallization, grinding, milling, standing, co-crystal formation from solution by evaporation, thermally driven crystallization from solution, co-crystal

formation from solution by addition of anti-solvent, co-crystal formation from solution by vapor-diffusion, co-crystal formation from solution by drown-out, co-crystal formation from solution by any combination of the above mentioned techniques, co-crystal formation by co-sublimation, co-crystal formation by sublimation using a Knudsen cell apparatus, co-crystal formation by standing the desired components of the co-crystal in the presence of solvent vapor, co-crystal formation by slurry conversion of the desired components of the co-crystal in a solvent or mixtures of solvents, or co-crystal formation by any combination of the above techniques in the presence of additives, nucleates, crystallization enhancers, precipitants, chemical stabilizers, or anti-oxidants. The co-crystallization kits can be used alone or as part of larger crystallization experiments. For example, kits can be constructed as single co-crystal former single well kits, single co-crystal former multi-well kits, multi-co-crystal former single well kits, or multi-co-crystal former multi-well kits.

In a further embodiment, the API is selected from an API of Table IV or elsewhere herein. For pharmaceuticals listed in Table IV, co-crystals can comprise such APIs in free form (i.e. free acid, free base, zwitter ion), salts, solvates, hydrates, or the like. For APIs in Table IV listed as salts, solvates, hydrates, and the like, the API can either be of the form listed in Table IV or its corresponding free form, or of another form that is not listed. Table IV includes the CAS number, chemical name, or a PCT or patent reference (each incorporated herein in their entireties). In further embodiments, the functional group of the particular API interacting with the co-crystal former is specified. A specific functional group of a co-crystal former, a specific co-crystal former, or a specified functional group or a specific co-crystal former interacting with the particular API may also be specified. It is noted that for Table II, the co-crystal former, and optionally the specific functionality, and each of the listed corresponding interacting groups are included as individual species of the present invention. Thus, each specific combination of a co-crystal former and one of the interacting groups in the same row may be specified as a species of the present invention. The same is true for other combinations as discussed in the Tables and elsewhere herein.

In each process according to the invention, there is a need to contact the API with the co-crystal forming compound. This may involve grinding the two solids together or melting one or both components and allowing them to recrystallize. This

may also involve either solubilizing the API and adding the co-crystal forming compound, or solubilizing the co-crystal forming compound and adding the API. Crystallization conditions are applied to the API and co-crystal forming compound. This may entail altering a property of the solution, such as pH or temperature and may require concentration of the solute, usually by removal of the solvent, typically by drying the solution. Solvent removal results in the concentration of both API and co-crystal former increasing over time so as to facilitate crystallization. Once the solid phase comprising any crystals is formed, this may be tested as described herein.

The co-crystals obtained as a result of such process steps may be readily incorporated into a pharmaceutical composition by conventional means. Pharmaceutical compositions in general are discussed in further detail below and may further comprise a pharmaceutically-acceptable diluent, excipient or carrier.

In a further aspect, the present invention provides a process for the production of a pharmaceutical composition, which process comprises:

(1) providing an API which has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine or of Table II or III;

(2) providing a co-crystal former which has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine or of Table I, II, or III;

(3) grinding, heating or contacting in solution the API with the co-crystal forming compound under crystallization conditions;

(4) isolating co-crystals formed thereby; and

(5) incorporating the co-crystals into a pharmaceutical composition.

In a still further aspect the present invention provides a process for the production of a pharmaceutical composition, which comprises:

- (1) grinding, heating or contacting in solution an API with a co-crystal forming compound, under crystallization conditions, so as to form a solid phase;
- (2) isolating co-crystals comprising the API and the co-crystal forming compound; and
- (3) incorporating the co-crystals into a pharmaceutical composition.

Assaying the solid phase for the presence of co-crystals of the API and the co-crystal forming compound may be carried out by conventional methods known in the art. For example, it is convenient and routine to use powder X-ray diffraction techniques to assess the presence of co-crystals. This may be affected by comparing the spectra of the API, the crystal forming compound and putative co-crystals in order to establish whether or not true co-crystals had been formed. Other techniques, used in an analogous fashion, include differential scanning calorimetry (DSC), thermogravimetric analysis (TGA) and Raman spectroscopy. Single crystal X-ray diffraction is especially useful in identifying co-crystal structures.

In a further aspect, the present invention therefore provides a process of screening for co-crystal compounds, which comprises:

- (1) providing (i) an API compound, and (ii) a co-crystal forming compound; and
- (2) screening for co-crystals of APIs with co-crystal forming compounds by subjecting each combination of API and co-crystal forming compound to a step comprising:
  - (a) grinding, heating or contacting in solution the API with the co-crystal forming compound under crystallization conditions so as to form a solid phase; and
  - (b) isolating co-crystals comprising the API and the co-crystal forming compound.

An alternative embodiment is drawn to a process of screening for co-crystal compounds, which comprises:



(1) providing (i) an API or a plurality of different APIs, and (ii) a co-crystal forming compound or a plurality of different co-crystal forming compounds, wherein at least one of the API and the co-crystal forming compound is provided as a plurality thereof; and

(2) screening for co-crystals of APIs with co-crystal forming compounds by subjecting each combination of API and co-crystal forming compound to a step comprising

(a) grinding, heating or contacting in solution the API with the co-crystal forming compound under crystallization conditions so as to form a solid phase; and

(b) isolating co-crystals comprising the API and the co-crystal forming compound.

#### Solubility Modulation

In a further aspect, the present invention provides a process for modulating the solubility of an API, which process comprises:

(1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and

(2) isolating co-crystals comprising the API and the co-crystal forming compound.

In one embodiment, the solubility of the API is modulated such that the aqueous solubility is increased. Solubility of APIs may be measured by any conventional means such as chromatography (e.g., HPLC) or spectroscopic determination of the amount of API in a saturated solution of the API, such as UV-spectroscopy, IR-spectroscopy, Raman spectroscopy, quantitative mass spectroscopy, or gas chromatography.

In another aspect of the invention, the API may have low aqueous solubility. Typically, low aqueous solubility in the present application refers to a compound having a solubility in water which is less than or equal to 10 mg/mL, when measured at 37 degrees C, and preferably less than or equal to 5 mg/mL or 1 mg/mL. Low aqueous solubility can further be specifically defined as less than or equal to 900, 800, 700, 600, 500, 400, 300, 200, 150, 100, 90, 80, 70, 60, 50, 40, 30, 20 micrograms/mL, or further 10, 5 or 1 micrograms/mL, or further 900, 800, 700, 600, 500, 400, 300,

200, 150, 100, 90, 80, 70, 60, 50, 40, 30, 20, or 10 ng/mL, or less than 10 ng/mL when measured at 37 degrees C. Aqueous solubility can also be specified as less than 500, 400, 300, 200, 150, 100, 75, 50 or 25 mg/mL. As embodiments of the present invention, solubility can be increased 2, 3, 4, 5, 7, 10, 15, 20, 25, 50, 75, 100, 200, 300, 500, 750, 1000, 5000, or 10,000 times by making a co-crystal of the reference form (e.g., crystalline or amorphous free acid, free base or zwitter ion, hydrate or solvate), or a salt thereof. Further aqueous solubility can be measured in simulated gastric fluid (SGF) or simulated intestinal fluid (SIF) rather than water. SGF (non-diluted) of the present invention is made by combining 1 g/L Triton X-100 and 2 g/L NaCl in water and adjusting the pH with 20 mM HCl to obtain a solution with a final pH=1.7 (SIF is 0.68% monobasic potassium phosphate, 1% pancreatin, and sodium hydroxide where the pH of the final solution is 7.5). The pH of the solvent used may also be specified as 1, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, or 12, or any pH in between successive values.

Examples of embodiments includes: co-crystal compositions with an aqueous solubility, at 37 degrees C and a pH of 7.0, that is increased at least 5 fold over the reference form, co-crystal compositions with a solubility in SGF that is increased at least 5 fold over the reference form, co-crystal compositions with a solubility in SIF that is increased at least 5 fold over the reference form.

### Dissolution Modulation

In another aspect of the present invention, the dissolution profile of the API is modulated whereby the aqueous dissolution rate or the dissolution rate in simulated gastric fluid or in simulated intestinal fluid, or in a solvent or plurality of solvents is increased. Dissolution rate is the rate at which API solids dissolve in a dissolution medium. For APIs whose absorption rates are faster than the dissolution rates (e.g., steroids), the rate-limiting step in the absorption process is often the dissolution rate. Because of a limited residence time at the absorption site, APIs that are not dissolved before they are removed from intestinal absorption site are considered useless. Therefore, the rate of dissolution has a major impact on the performance of APIs that are poorly soluble. Because of this factor, the dissolution rate of APIs in solid dosage forms is an important, routine, quality control parameter used in the API manufacturing process.

$$\text{Dissolution rate} = K S (C_s - C)$$

where K is dissolution rate constant, S is the surface area,  $C_s$  is the apparent solubility, and C is the concentration of API in the dissolution medium.

For rapid API absorption,  $C_s - C$  is approximately equal to  $C_s$ .

The dissolution rate of APIs may be measured by conventional means known in the art.

The increase in the dissolution rate of a co-crystal, as compared to the reference form (e.g., free form or salt), may be specified, such as by 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100%, or by 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 500, 1000, 10,000, or 100,000 fold greater than the reference form (e.g., free form or salt form) in the same solution. Conditions under which the dissolution rate is measured is the same as discussed above. The increase in dissolution may be further specified by the time the composition remains supersaturated before reaching equilibrium solubility.

Examples of above embodiments include: co-crystal compositions with a dissolution rate in aqueous solution, at 37 degrees C and a pH of 7.0, that is increased at least 5 fold over the reference form, co-crystal compositions with a dissolution rate in SGF that is increased at least 5 fold over the reference form, co-crystal compositions with a dissolution rate in SIF that is increased at least 5 fold over the reference form.

### Bioavailability Modulation

The methods of the present invention are used to make a pharmaceutical API formulation with greater solubility, dissolution, and bioavailability. Bioavailability can be improved via an increase in AUC, reduced time to  $T_{\max}$ , (the time to reach peak blood serum levels), or increased  $C_{\max}$ . The present invention can result in higher plasma concentrations of API when compared to the neutral form or salt alone (reference form).

AUC is the area under the plot of plasma concentration of API (not logarithm of the concentration) against time after API administration. The area is conveniently determined by the "trapezoidal rule": The data points are connected by straight line segments, perpendiculars are erected from the abscissa to each data point, and the sum

of the areas of the triangles and trapezoids so constructed is computed. When the last measured concentration ( $C_n$ , at time  $t_n$ ) is not zero, the AUC from  $t_n$  to infinite time is estimated by  $C_n/k_{el}$ .

The AUC is of particular use in estimating bioavailability of APIs, and in estimating total clearance of APIs ( $Cl_T$ ). Following single intravenous doses,  $AUC = D/Cl_T$ , for single compartment systems obeying first-order elimination kinetics, where  $D$  is the dose; alternatively,  $AUC = C_0/k_{el}$ , where  $k_{el}$  is the API elimination rate constant. With routes other than the intravenous, for such systems,  $AUC = F \cdot D/Cl_T$ , where  $F$  is the absolute bioavailability of the API.

Thus, in a further aspect, the present invention provides a process for modulating the bioavailability of an API when administered in its normal and effective dose range as a co-crystal, whereby the AUC is increased, the time to  $T_{max}$  is reduced, or  $C_{max}$  is increased, as compared to a reference form, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

Examples of the above embodiments include: co-crystal compositions with a time to  $T_{max}$  that is reduced by at least 10% as compared to the reference form, co-crystal compositions with a time to  $T_{max}$  that is reduced by at least 20% over the reference form, co-crystal compositions with a time to  $T_{max}$  that is reduced by at least 40% over the reference form, co-crystal compositions with a time to  $T_{max}$  that is reduced by at least 50% over the reference form, co-crystal compositions with a  $T_{max}$  that is reduced by at least 60% over the reference form, co-crystal compositions with a  $T_{max}$  that is reduced by at least 70% over the reference form, co-crystal compositions with a  $T_{max}$  that is reduced by at least 80% over the reference form, co-crystal compositions with a  $T_{max}$  that is reduced by at least 90% over the reference form, co-crystal compositions with a  $C_{max}$  that is increased by at least 20% over the reference form, co-crystal compositions with a  $C_{max}$  that is increased by at least 30% over the reference form, co-crystal compositions with a  $C_{max}$  that is increased by at least 40% over the reference form, co-crystal compositions with a  $C_{max}$  that is increased by at least 50% over the reference form, co-crystal compositions with a  $C_{max}$  that is



increased by at least 60% over the reference form, co-crystal compositions with a  $C_{\max}$  that is increased by at least 70% over the reference form, co-crystal compositions with a  $C_{\max}$  that is increased by at least 80% over the reference form, co-crystal compositions with a  $C_{\max}$  that is increased by at least 2 fold, 3 fold, 5 fold, 7.5 fold, 10 fold, 25 fold, 50 fold or 100 fold, co-crystal compositions with an AUC that is increased by at least 10% over the reference form, co-crystal compositions with an AUC that is increased by at least 20% over the reference form, co-crystal compositions with an AUC that is increased by at least 30% over the reference form, co-crystal compositions with an AUC that is increased by at least 40% over the reference form, co-crystal compositions with an AUC that is increased by at least 50% over the reference form, co-crystal compositions with an AUC that is increased by at least 60% over the reference form, co-crystal compositions with an AUC that is increased by at least 70% over the reference form, co-crystal compositions with an AUC that is increased by at least 80% over the reference form or co-crystal compositions with an AUC that is increased by at least 2 fold, 3 fold, 4 fold, 5 fold, 6 fold, 7 fold, 8 fold, 9 fold, or 10 fold. Other examples include wherein the reference form is crystalline, wherein the reference form is amorphous, wherein the reference form is an anhydrous crystalline sodium salt, or wherein the reference form is an anhydrous crystalline HCl salt.

#### Dose Response Modulation

In a further aspect the present invention provides a process for improving the dose response of an API, which process comprises:

- (1) contacting in solution an API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

Dose response is the quantitative relationship between the magnitude of response and the dose inducing the response and may be measured by conventional means known in the art. The curve relating effect (as the dependent variable) to dose (as the independent variable) for an API-cell system is the "dose-response curve". Typically, the dose-response curve is the measured response to an API plotted against

the dose of the API (mg/kg) given. The dose response curve can also be a curve of AUC against the dose of the API given.

In an embodiment of the present invention, a co-crystal of the present invention has an increased dose response curve or a more linear dose response curve than the corresponding reference compound.

#### Increased Stability

In a still further aspect the present invention provides a process for improving the stability of an API (as compared to a reference form such as its free form or a salt thereof), which process comprises:

- (1) grinding, heating or contacting in solution the pharmaceutical salt with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

In a preferred embodiment, the compositions of the present invention, including the API or active pharmaceutical ingredient (API) and formulations comprising the API, are suitably stable for pharmaceutical use. Preferably, the API or formulations thereof of the present invention are stable such that when stored at 30 degrees C for 2 years, less than 0.2 % of any one degradant is formed. The term degradant refers herein to product(s) of a single type of chemical reaction. For example, if a hydrolysis event occurs that cleaves a molecule into two products, for the purpose of the present invention, it would be considered a single degradant. More preferably, when stored at 40 degrees C for 2 years, less than 0.2 % of any one degradant is formed. Alternatively, when stored at 30 degrees C for 3 months, less than 0.2% or 0.15 %, or 0.1 % of any one degradant is formed, or when stored at 40 degrees C for 3 months, less than 0.2 % or 0.15 %, or 0.1 % of any one degradant is formed. Further alternatively, when stored at 60 degrees C for 4 weeks, less than 0.2 % or 0.15 %, or 0.1 % of any one degradant is formed. The relative humidity (RH) may be specified as ambient (RH), 75 % (RH), or as any single integer between 1 to 99 %.

### Difficult to Salt or Unsaltable Compounds

In a still further aspect the present invention provides a process for making co-crystals of unsaltable or difficult to salt APIs which process comprises:

- (1) grinding, heating or contacting in solution an API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

Difficult to salt compounds include bases with a  $pK_a < 3$  or acids with a  $pK_a > 10$ . Zwitter ions are also difficult to salt or unsaltable compounds according to the present invention.

### Decreasing Hygroscopicity

In a still further aspect, the present invention provides a method for decreasing the hygroscopicity of an API, which method comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

An aspect of the present invention provides a pharmaceutical composition comprising a co-crystal of an API that is less hygroscopic than amorphous or crystalline, free form or salt (including metal salts such as sodium, potassium, lithium, calcium, magnesium) or another reference compound. Hygroscopicity can be assessed by dynamic vapor sorption analysis, in which 5-50 mg of the compound is suspended from a Cahn microbalance. The compound being analyzed should be placed in a non-hygroscopic pan and its weight should be measured relative to an empty pan composed of identical material and having nearly identical size, shape, and weight. Ideally, platinum pans should be used. The pans should be suspended in a chamber through which a gas, such as air or nitrogen, having a controlled and known percent relative humidity (%RH) is flowed until equilibrium criteria are met. Typical equilibrium criteria include weight changes of less than 0.01 % over 3 minutes at

constant humidity and temperature. The relative humidity should be measured for samples dried under dry nitrogen to constant weight ( $<0.01$  % change in 3 minutes) at 40 degrees C unless doing so would de-solvate or otherwise convert the material to an amorphous compound. In one aspect, the hygroscopicity of a dried compound can be assessed by increasing the RH from 5 to 95 % in increments of 5 % RH and then decreasing the RH from 95 to 5 % in 5 % increments to generate a moisture sorption isotherm. The sample weight should be allowed to equilibrate between each change in % RH. If the compound deliquesces or becomes amorphous above 75 % RH, but below 95 % RH, the experiment should be repeated with a fresh sample and the relative humidity range for the cycling should be narrowed to 5-75 % RH or 10-75 % RH, instead of 5-95 %RH. If the sample cannot be dried prior to testing due to lack of form stability, than the sample should be studied using two complete humidity cycles of either 10-75 % RH or 5-95 % RH, and the results of the second cycle should be used if there is significant weight loss at the end of the first cycle.

Hygroscopicity can be defined using various parameters. For purposes of the present invention, a non-hygroscopic molecule should not gain or lose more than 1.0 %, or more preferably, 0.5 % weight at 25 degrees C when cycled between 10 and 75 % RH (relative humidity at 25 degrees C). The non-hygroscopic molecule more preferably should not gain or lose more than 1.0 %, or more preferably, 0.5 % weight when cycled between 5 and 95 % RH at 25 degrees C, or more than 0.25 % of its weight between 10 and 75 % RH. Most preferably, a non-hygroscopic molecule will not gain or lose more than 0.25 % of its weight when cycled between 5 and 95 % RH.

Alternatively, for purposes of the present invention, hygroscopicity can be defined using the parameters of Callaghan et al., "Equilibrium moisture content of pharmaceutical excipients", in *Api Dev. Ind. Pharm.*, Vol. 8, pp. 335-369 (1982). Callaghan et al. classified the degree of hygroscopicity into four classes.

Class 1: Non-hygroscopic

Essentially no moisture increases occur at relative humidities below 90 %.

Class 2: Slightly hygroscopic

Essentially no moisture increases occur at relative humidities below 80%.



**Class 3: Moderately hygroscopic**      Moisture content does not increase more than 5 % after storage for 1 week at relative humidities below 60 %.

**Class 4: Very hygroscopic**      Moisture content increase may occur at relative humidities as low as 40 to 50 %.

Alternatively, for purposes of the present invention, hygroscopicity can be defined using the parameters of the European Pharmacopoeia Technical Guide (1999, p. 86) which has defined hygroscopicity, based on the static method, after storage at 25 degrees C for 24 hours at 80 % RH:

**Slightly hygroscopic:** Increase in mass is less than 2 percent m/m and equal to or greater than 0.2 percent m/m.

**Hygroscopic:** Increase in mass is less than 15 percent m/m and equal to or greater than 0.2 percent m/m.

**Very Hygroscopic:** Increase in mass is equal to or greater than 15 percent m/m.

**Deliquescent:** Sufficient water is absorbed to form a liquid.

Co-crystals of the present invention can be set forth as being in Class 1, Class 2, or Class 3, or as being Slightly hygroscopic, Hygroscopic, or Very Hygroscopic. Co-crystals of the present invention can also be set forth based on their ability to reduce hygroscopicity. Thus, preferred co-crystals of the present invention are less hygroscopic than a reference compound. The reference compound can be specified as the API in free form (free acid, free base, hydrate, solvate, etc.) or salt (e.g., especially metal salts such as sodium, potassium, lithium, calcium, or magnesium). Further included in the present invention are co-crystals that do not gain or lose more than 1.0 % weight at 25 degrees C when cycled between 10 and 75 % RH, wherein the reference compound gains or loses more than 1.0 % weight under the same conditions. Further included in the present invention are co-crystals that do not gain

or lose more than 0.5 % weight at 25 degrees C when cycled between 10 and 75 % RH, wherein the reference compound gains or loses more than 0.5 % or more than 1.0 % weight under the same conditions. Further included in the present invention are co-crystals that do not gain or lose more than 1.0 % weight at 25 degrees C when cycled between 5 and 95 % RH, wherein the reference compound gains or loses more than 1.0 % weight under the same conditions. Further included in the present invention are co-crystals that do not gain or lose more than 0.5 % weight at 25 degrees C when cycled between 5 and 95 % RH, wherein the reference compound gains or loses more than 0.5 % or more than 1.0 % weight under the same conditions. Further included in the present invention are co-crystals that do not gain or lose more than 0.25 % weight at 25 degrees C when cycled between 5 and 95 % RH, wherein the reference compound gains or loses more than 0.5 % or more than 1.0 % weight under the same conditions.

Further included in the present invention are co-crystals that have a hygroscopicity (according to Callaghan et al.) that is at least one class lower than the reference compound or at least two classes lower than the reference compound. Included are a Class 1 co-crystal of a Class 2 reference compound, a Class 2 co-crystal of a Class 3 reference compound, a Class 3 co-crystal of a Class 4 reference compound, a Class 1 co-crystal of a Class 3 reference compound, a Class 1 co-crystal of a Class 4 reference compound, or a Class 2 co-crystal of a Class 4 reference compound.

Further included in the present invention are co-crystals that have a hygroscopicity (according to the European Pharmacopoeia Technical Guide) that is at least one class lower than the reference compound or at least two classes lower than the reference compound. Non-limiting examples include; a slightly hygroscopic co-crystal of a hygroscopic reference compound, a hygroscopic co-crystal of a very hygroscopic reference compound, a very hygroscopic co-crystal of a deliquescent reference compound, a slightly hygroscopic co-crystal of a very hygroscopic reference compound, a slightly hygroscopic co-crystal of a deliquescent reference compound, and a hygroscopic co-crystal of a deliquescent reference compound.

#### Crystallizing Amorphous Compounds

In a further aspect, the present invention provides a process for crystallizing an amorphous compound, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

An amorphous compound includes compounds that do not crystallize using routine methods in the art.

#### Decreasing Form Diversity

In a still further embodiment aspect the present invention provides a process for reducing the form diversity of an API, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

For purposes of the present invention, the number of forms of a co-crystal is compared to the number of forms of a reference compound (e.g. the free form or a salt of the API) that can be made using routine methods in the art.

#### Morphology Modulation

In a still further aspect the present invention provides a process for modifying the morphology of an API, which process comprises:

- (1) grinding, heating or contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound; and
- (2) isolating co-crystals comprising the API and the co-crystal forming compound.

In an embodiment the co-crystal comprises or consists of a co-crystal former and a pharmaceutical wherein the interaction between the two, e.g., H-bonding, occurs between a functional group of Table III of an API with a corresponding

interacting group of Table III. In a further embodiment, the co-crystal comprises a co-crystal former of Table I or II and an API with a corresponding interacting group of Table III. In a further embodiment the co-crystal comprises an API from Table IV and a co-crystal former with a functional group of Table III. In a further embodiment, the co-crystal is from Table I or II. In an aspect of the invention, only co-crystals having an H-bond acceptor on the first molecule and an H-bond donor on the second molecule, where the first and second molecules are either co-crystal former and API respectively or API and co-crystal former respectively, are included in the present invention. Table IV includes the CAS number, chemical name or a PCT or patent reference (each incorporated herein in their entireties). Thus, whether a particular API contains an H-bond donor, acceptor or both is readily apparent.

In another embodiment, the co-crystal former and API each have only one H-bond donor/acceptor. In another aspect, the molecular weight of the API is less than 2000, 1500, 1000, 750, 500, 350, 200, or 150 Daltons. In another embodiment, the molecular weight of the API is between 100-200, 200-300, 300-400, 400-500, 500-600, 600-700, 700-800, 800-900, 900-1000, 1000-1200, 1200-1400, 1400-1600, 1600-1800, or 1800-2000. APIs with the above molecular weights may also be specifically excluded from the present invention.

In another embodiment, peptides, proteins, nucleic acids or other biological APIs are excluded from the present invention. In another embodiment, all non-pharmaceutically acceptable co-crystal formers are excluded from the present invention. In another embodiment, organometallic APIs are excluded from the present invention. In another embodiment, a co-crystal former comprising any one or more of the functional groups of Table III may be specifically excluded from the present invention. In another embodiment, any one or more of the co-crystal formers of Table I or II may be specifically excluded from the present invention. Any APIs currently known in the art may also be specifically excluded from the present invention. For example, carbanazepine, itraconazole, nabumetone, fluoxetine, acetaminophen and theophylline can each be specifically excluded from the present invention. In another embodiment, the API is not a salt, is not a non-metal salt, or is not a metal salt, e.g., sodium, potassium, lithium, calcium or magnesium. In another embodiment, the API is a salt, is a non-metal salt, or is a metal salt, e.g., sodium, potassium, lithium, calcium, magnesium. In one embodiment, the API does not contain a halogen. In one embodiment, the API does contain a halogen.



In another embodiment, any one or more of the APIs of Table IV may be specifically excluded from the present invention. Any APIs currently known in the art may also be specifically excluded from the present invention. For example, nabumetone:2,3-naphthalenediol, fluoxetine HCl:benzoic acid, fluoxetine HCl:succinic acid, acetaminophen:piperazine, acetaminophen:theophylline, theophylline:salicylic acid, theophylline:p-hydroxybenzoic acid, theophylline:sorbic acid, theophylline:1-hydroxy-2-naphthoic acid, theophylline:glycolic acid, theophylline:2,5-dihydroxybenzoic acid, theophylline:chloroacetic acid, bis(diphenylhydantoin):9-ethyladenine acetylacetone solvate, bis(diphenylhydantoin):9-ethyladenine 2,4-pentanedione solvate, 5,5-diphenylbarbituric acid:9-ethyladenine, bis(diphenylhydantoin):9-ethyladenine, 4-aminobenzoic acid:4-aminobenzonitrile, sulfadimidine:salicylic acid, 8-hydroxyquinolinium 4-nitrobenzoate:4-nitrobenzoic acid, sulfaproxyline:caffeine, retro-inverso-isopropyl (2R,3S)-4-cyclohexyl-2-hydroxy-3-(N-((2R)-2-morpholinocarbonylmethyl-3-(1-naphthyl)propionyl)-L-histidylamino)butyrate:cinnamic acid monohydrate, benzoic acid:isonicotinamide, 3-(2-N',N'-(dimethylhydrazino)-4-thiazolylmethylthio)-N''-sulfamoylpropionamidine:maleic acid, diglycine hydrochloride ( $\text{C}_2\text{H}_5\text{NO}_2:\text{C}_2\text{H}_6\text{NO}_2^+\text{Cl}^-$ ), octadecanoic acid:3-pyridinecarboxamide, cis-N-(3-methyl-1-(2-(1,2,3,4-tetrahydro)naphthyl)-piperidin-4-yl)-N-phenylpropanamide hydrochloride:oxalic acid, trans-N-(3-methyl-1-(2-(1,2,3,4-tetrahydro)naphthyl)-piperidin-4-ylum)-N-phenylpropanamide oxalate:oxalic acid dihydrate, bis(1-(3-((4-(2-isopropoxyphenyl)-1-piperazinyl)methyl)benzoyl)piperidine) succinate:succinic acid, bis(p-cyanophenyl)imidazolylmethane:succinic acid, cis-1-((4-(1-imidazolylmethyl)cyclohexyl)methyl)imidazole:succinic acid, (+)-2-(5,6-dimethoxy-1,2,3,4-tetrahydro-1-naphthyl)imidazoline:(+)-dibenzoyl-D-tartaric acid, raclopride:tartaric acid, 2,6-diamino-9-ethylpurine:5,5-diethylbarbituric acid, 5,5-diethylbarbituric acid:bis(2-aminopyridine), 5,5-diethylbarbituric acid:acetamide, 5,5-diethylbarbituric acid: $\text{KI}_3$ , 5,5-diethylbarbituric acid:urea, bis(barbital):hexamethylphosphoramide, 5,5-diethylbarbituric acid:imidazole, barbital:1-methylimidazole, 5,5-diethylbarbituric acid:N-methyl-2-pyridone, 2,4-diamino-5-(3,4,5-trimethoxybenzyl)-pyrimidine:5,5-diethylbarbituric acid, bis(barbital):caffeine, bis(barbital):1-methylimidazole, bis(beta-cyclodextrin):bis(barbital) hydrate, tetrakis(beta-cyclodextrin):tetrakis(barbital), 9-

ethyladenine:5,5-diethylbarbituric acid, barbital:N'-(p-cyanophenyl)-N-(p-iodophenyl)melamine, barbital:2-amino-4-(m-bromophenylamino)-6-chloro-1,3,5-triazine, 5,5-diethylbarbituric acid:N,N'-diphenylmelamine, 5,5-diethylbarbituric acid:N,N'-bis(p-chlorophenyl)melamine, N,N'-bis(p-bromophenyl)melamine:5,5-diethylbarbituric acid, 5,5-diethylbarbituric acid:N,N'-bis(p-iodophenyl)melamine, 5,5-diethylbarbituric acid:N,N'-bis(p-tolyl)melamine, 5,5-diethylbarbituric acid:N,N'-bis(m-tolyl)melamine, 5,5-diethylbarbituric acid:N,N'-bis(m-chlorophenyl)melamine, N,N'-Bis(m-methylphenyl)melamine:barbital, N,N'-bis(m-chlorophenyl)melamine:barbital tetrahydrofuran solvate, 5,5-diethylbarbituric acid:N,N'-bis(t-butyl)melamine, 5,5-diethylbarbituric acid:N,N'-di(t-butyl)melamine, 6,6'-diquinolyl ether:5,5-diethylbarbituric acid, 5-t-butyl-2,4,6-triaminopyrimidine:diethylbarbituric acid, N,N'-bis(4-carboxymethylphenyl)melamine:barbital ethanol solvate, N,N'-bis(4-t-butylphenyl)melamine:barbital, tris(5,17-N,N'-bis(4-amino-6-(butylamino)-1,3,5-triazin-2-yl)diamino-11,23-dinitro-25,26,27,28-tetrapropoxycalix(4)arene):hexakis(diethylbarbituric acid) toluene solvate, N,N'-bis(m-fluorophenyl)melamine:barbital, N,N'-bis(m-bromophenyl)melamine:barbital acetone solvate, N,N'-bis(m-iodophenyl)melamine:barbital acetonitrile solvate, N,N'-bis(m-trifluoromethylphenyl)melamine:barbital acetonitrile solvate, aminopyrine:barbital, N,N'-bis(4-fluorophenyl)melamine:barbital, N,N'-bis(4-trifluoromethylphenyl)melamine:barbital, 2,4-diamino-5-(3,4,5-trimethoxybenzyl)pyrimidine:barbital, hydroxybutyrate:hydroxyvalerate, 2-aminopyrimidine:succinic acid, 1,3-bis(((6-methylpyrid-2-yl)amino)carbonyl)benzene:glutaric acid, 5-t-butyl-2,4,6-triaminopyrimidine:diethylbarbituric acid, bis(dithiobiuret-S,S')nickel(II):diuracil, platinum 3,3'-dihydroxymethyl-2,2'-bipyridine dichloride:AgF<sub>3</sub>CSO<sub>3</sub>, 4,4'-bipyridyl:isophthalic acid, 4,4'-bipyridyl:1,4-naphthalenedicarboxylic acid, 4,4'-bipyridyl:1,3,5-cyclohexane-tricarboxylic acid, 4,4'-bipyridyl:tricarballic acid, urotropin:azelaic acid, insulin:C8-HI (octanoyl-N<sup>e</sup>-LysB29-human insulin), isonicotinamide:cinnamic acid, isonicotinamide:3-hydroxybenzoic acid, isonicotinamide:3-N,N-dimethylaminobenzoic acid, isonicotinamide:3,5-bis(trifluoromethyl)-benzoic acid, isonicotinamide:d,l-mandelic acid, isonicotinamide:chloroacetic acid, isonicotinamide:fumaric acid monoethyl ester, isonicotinamide:12-bromododecanoic acid, isonicotinamide:fumaric acid,

isonicotinamide:succinic acid, isonicotinamide:4-ketopimelic acid,  
 isonicotinamide:thiodiglycolic acid, 1,3,5-cyclohexane-tricarboxylic  
 acid:hexamethyltetramine, 1,3,5-cyclohexane-tricarboxylic acid:4,7-phenanthroline,  
 4,7-phenanthroline:oxalic acid, 4,7-phenanthroline:terephthalic acid, 4,7-  
 phenanthroline: 1,3,5-cyclohexane-tricarboxylic acid, 4,7-phenanthroline:1,4-  
 naphthalenedicarboxylic acid, pyrazine:methanoic acid, pyrazine:ethanoic acid,  
 pyrazine:propanoic acid, pyrazine:butanoic acid, pyrazine:pentanoic acid,  
 pyrazine:hexanoic acid, pyrazine:heptanoic acid, pyrazine:octanoic acid,  
 pyrazine:nonanoic acid, pyrazine:decanoic acid, diammine-(deoxy-quanyl-quanyl-  
 $N^7, N^7$ )-platinum:tris(glycine) hydrate, 2-aminopyrimidine:p-phenylenediacetic acid,  
 bis(2-aminopyrimidin-1-ium)fumarate:fumaric acid, 2-aminopyrimidine:indole-3-  
 acetic acid, 2-aminopyrimidine:N-methylpyrrole-2-carboxylic acid, 2-  
 aminopyrimidine:thiophen-2-carboxylic acid, 2-aminopyrimidine:(+)-camphoric acid,  
 2,4,6-Trinitrobenzoic acid: 2-aminopyrimidine, 2-aminopyrimidine:4-aminobenzoic  
 acid, 2-aminopyrimidine:bis(phenoxyacetic acid), 2-aminopyrimidine:(2,4-  
 dichlorophenoxy)acetic acid, 2-aminopyrimidine:(3,4-dichlorophenoxy)acetic acid, 2-  
 aminopyrimidine:indole-2-carboxylic acid, 2-aminopyrimidine:terephthalic acid, 2-  
 aminopyrimidine:bis(2-nitrobenzoic acid), 2-aminopyrimidine:bis(2-aminobenzoic  
 acid), 2-aminopyrimidine:3-aminobenzoic acid, 2-hexeneoic acid:isonicotinamide, 4-  
 nitrobenzoic acid:isonicotinamide, 3,5-dinitrobenzoic acid:isonicotinamide:4-  
 methylbenzoic acid, 2-amino-5-nitropyrimidine:2-amino-3-nitropyridine, 3,5-  
 dinitrobenzoic acid:4-chlorobenzamide, 3-dimethylaminobenzoic acid:4-  
 chlorobenzamide, fumaric acid:4-chlorobenzamide, oxine:4-nitrobenzoic acid,  
 oxine:3,5-dinitrobenzoic acid, oxine:3,5-dinitrosalicylic acid, 3-[2-( $N^7, N^7$ -  
 dimethylhydrazino)-4-thiazolylmethylthio]- $N^2$ -sulfamoylpropionamide:maleic acid,  
 5-fluorouracil:9-ethylhypoxanthine, 5-fluorouracil:cytosine dihydrate, 5-  
 fluorouracil:theophylline monohydrate, stearic acid:nicotinamide, cis-1-{[4-(1-  
 imidazolylmethyl)cyclohexyl]methyl}imidazole:succinic acid, CGS18320B:succinic  
 acid, sulfaproxyline:caffeine, 4-aminobenzoic acid:4-aminobenzonitrile, 3,5-  
 dinitrobenzoic acid:isonicotinamide:3-methylbenzoic acid, 3,5-dinitrobenzoic  
 acid:isonicotinamide:4-(dimethylamino)benzoic acid, 3,5-dinitrobenzoic  
 acid:isonicotinamide:4-hydroxy-3-methoxycinnamic acid, isonicotinamide:oxalic  
 acid, isonicotinamide:malonic acid, isonicotinamide:succinic acid,  
 isonicotinamide:glutaric acid, isonicotinamide:adipic acid, benzoic

acid:isonicotinamide, mazapertine:succinate, betaine:dichloronitrophenol, betainepyridine:dichloronitrophenol, betainepyridine:pentachlorophenol, 4-{2-[1-(2-hydroxyethyl)-4-pyridylidene]-ethylidene}-cyclo-hexa-2,5-dien-1-one:methyl 2,4-dihydroxybenzoate, 4-{2-[1-(2-hydroxyethyl)-4-pyridylidene]-ethylidene}-cyclo-hexa-2,5-dien-1-one:2,4-dihydroxypropiophenone, 4-{2-[1-(2-hydroxyethyl)-4-pyridylidene]-ethylidene}-cyclo-hexa-2,5-dien-1-one:2,4-dihydroxyacetophenone, squaric acid:4,4'-dipyridylacetylene, squaric acid:1,2-bis(4-pyridyl)ethylene, chloranilic acid:1,4-bis[(4-pyridyl)ethynyl]benzene, 4,4'-bipyridine:phthalic acid, 4,4'-dipyridylacetylene:phthalic acid, bis(pentamethylcyclopentadienyl)iron:bromanilic acid, bis(pentamethylcyclopentadienyl)iron:chloranilic acid, bis(pentamethylcyclopentadienyl)iron:cyananilic acid, pyrazinotetrathiafulvalene:chloranilic acid, phenol:pentafluorophenol, co-crystals of itraconazole, and co-crystals of topiramate are specifically excluded from the present invention.

Excipients employed in pharmaceutical compositions of the present invention can be solids, semi-solids, liquids or combinations thereof. Preferably, excipients are solids. Compositions of the invention containing excipients can be prepared by any known technique of pharmacy that comprises admixing an excipient with an API or therapeutic agent. A pharmaceutical composition of the invention contains a desired amount of API per dose unit and, if intended for oral administration, can be in the form, for example, of a tablet, a caplet, a pill, a hard or soft capsule, a lozenge, a cachet, a dispensable powder, granules, a suspension, an elixir, a dispersion, a liquid, or any other form reasonably adapted for such administration. If intended for parenteral administration, it can be in the form, for example, of a suspension or transdermal patch. If intended for rectal administration, it can be in the form, for example, of a suppository. Presently preferred are oral dosage forms that are discrete dose units each containing a predetermined amount of the API, such as tablets or capsules.

In another embodiment, APIs with an inappropriate pH for transdermal patches can be co-crystallized with an appropriate co-crystal former, thereby adjusting its pH to an appropriate level for use as a transdermal patch. In another embodiment, an APIs pH level can be optimized for use in a transdermal patch via co-crystallization with an appropriate co-crystal former.



Non-limiting examples follow of excipients that can be used to prepare pharmaceutical compositions of the invention.

Pharmaceutical compositions of the invention optionally comprise one or more pharmaceutically acceptable carriers or diluents as excipients. Suitable carriers or diluents illustratively include, but are not limited to, either individually or in combination, lactose, including anhydrous lactose and lactose monohydrate; starches, including directly compressible starch and hydrolyzed starches (e.g., Celutab<sup>TM</sup> and Emdex<sup>TM</sup>); mannitol; sorbitol; xylitol; dextrose (e.g., Cerelose<sup>TM</sup> 2000) and dextrose monohydrate; dibasic calcium phosphate dihydrate; sucrose-based diluents; confectioner's sugar; monobasic calcium sulfate monohydrate; calcium sulfate dihydrate; granular calcium lactate trihydrate; dextrates; inositol; hydrolyzed cereal solids; amylose; celluloses including microcrystalline cellulose, food grade sources of alpha- and amorphous cellulose (e.g., RexcelJ), powdered cellulose, hydroxypropylcellulose (HPC) and hydroxypropylmethylcellulose (HPMC); calcium carbonate; glycine; bentonite; block co-polymers; polyvinylpyrrolidone; and the like. Such carriers or diluents, if present, constitute in total about 5% to about 99%, preferably about 10% to about 85%, and more preferably about 20% to about 80%, of the total weight of the composition. The carrier, carriers, diluent, or diluents selected preferably exhibit suitable flow properties and, where tablets are desired, compressibility.

Lactose, mannitol, dibasic sodium phosphate, and microcrystalline cellulose (particularly Avicel PH microcrystalline cellulose such as Avicel PH 101), either individually or in combination, are preferred diluents. These diluents are chemically compatible with many co-crystals described herein. The use of extragranular microcrystalline cellulose (that is, microcrystalline cellulose added to a granulated composition) can be used to improve hardness (for tablets) and/or disintegration time. Lactose, especially lactose monohydrate, is particularly preferred. Lactose typically provides compositions having suitable release rates of co-crystals, stability, pre-compression flowability, and/or drying properties at a relatively low diluent cost. It provides a high density substrate that aids densification during granulation (where wet granulation is employed) and therefore improves blend flow properties and tablet properties.

Pharmaceutical compositions of the invention optionally comprise one or more pharmaceutically acceptable disintegrants as excipients, particularly for tablet

formulations. Suitable disintegrants include, but are not limited to, either individually or in combination, starches, including sodium starch glycolate (e.g., Explotab<sup>TM</sup> of PenWest) and pregelatinized corn starches (e.g., National<sup>TM</sup> 1551 of National Starch and Chemical Company, National<sup>TM</sup> 1550, and Colorcon<sup>TM</sup> 1500), clays (e.g., Veegum<sup>TM</sup> HV of R.T. Vanderbilt), celluloses such as purified cellulose, microcrystalline cellulose, methylcellulose, carboxymethylcellulose and sodium carboxymethylcellulose, croscarmellose sodium (e.g., Ac-Di-Sol<sup>TM</sup> of FMC), alginates, crospovidone, and gums such as agar, guar, locust bean, karaya, pectin and tragacanth gums.

Disintegrants may be added at any suitable step during the preparation of the composition, particularly prior to granulation or during a lubrication step prior to compression. Such disintegrants, if present, constitute in total about 0.2% to about 30%, preferably about 0.2% to about 10%, and more preferably about 0.2% to about 5%, of the total weight of the composition.

Croscarmellose sodium is a preferred disintegrant for tablet or capsule disintegration, and, if present, preferably constitutes about 0.2% to about 10%, more preferably about 0.2% to about 7%, and still more preferably about 0.2% to about 5%, of the total weight of the composition. Croscarmellose sodium confers superior intragranular disintegration capabilities to granulated pharmaceutical compositions of the present invention.

Pharmaceutical compositions of the invention optionally comprise one or more pharmaceutically acceptable binding agents or adhesives as excipients, particularly for tablet formulations. Such binding agents and adhesives preferably impart sufficient cohesion to the powder being tableted to allow for normal processing operations such as sizing, lubrication, compression and packaging, but still allow the tablet to disintegrate and the composition to be absorbed upon ingestion. Such binding agents may also prevent or inhibit crystallization or recrystallization of a co-crystal of the present invention once the salt has been dissolved in a solution. Suitable binding agents and adhesives include, but are not limited to, either individually or in combination, acacia; tragacanth; sucrose; gelatin; glucose; starches such as, but not limited to, pregelatinized starches (e.g., National<sup>TM</sup> 1511 and National<sup>TM</sup> 1500); celluloses such as, but not limited to, methylcellulose and carmellose sodium (e.g., Tylose<sup>TM</sup>); alginic acid and salts of alginic acid; magnesium aluminum silicate; PEG; guar gum; polysaccharide acids; bentonites; povidone, for example povidone K-15,

K-30 and K-29/32; polymethacrylates; HPMC; hydroxypropylcellulose (e.g., Klucel<sup>TM</sup> of Aqualon); and ethylcellulose (e.g., Ethocel<sup>TM</sup> of the Dow Chemical Company). Such binding agents and/or adhesives, if present, constitute in total about 0.5% to about 25%, preferably about 0.75% to about 15%, and more preferably about 1% to about 10%, of the total weight of the pharmaceutical composition.

Many of the binding agents are polymers comprising amide, ester, ether, alcohol or ketone groups and, as such, are preferably included in pharmaceutical compositions of the present invention. Polyvinylpyrrolidones such as povidone K-30 are especially preferred. Polymeric binding agents can have varying molecular weight, degrees of crosslinking, and grades of polymer. Polymeric binding agents can also be copolymers, such as block co-polymers that contain mixtures of ethylene oxide and propylene oxide units. Variation in these units' ratios in a given polymer affects properties and performance. Examples of block co-polymers with varying compositions of block units are Poloxamer 188 and Poloxamer 237 (BASF Corporation).

Pharmaceutical compositions of the invention optionally comprise one or more pharmaceutically acceptable wetting agents as excipients. Such wetting agents are preferably selected to maintain the co-crystal in close association with water, a condition that is believed to improve bioavailability of the composition. Such wetting agents can also be useful in solubilizing or increasing the solubility of co-crystals.

Non-limiting examples of surfactants that can be used as wetting agents in pharmaceutical compositions of the invention include quaternary ammonium compounds, for example benzalkonium chloride, benzethonium chloride and cetylpyridinium chloride, dioctyl sodium sulfosuccinate, polyoxyethylene alkylphenyl ethers, for example nonoxynol 9, nonoxynol 10, and degrees Ctoxynol 9, poloxamers (polyoxyethylene and polyoxypropylene block copolymers), polyoxyethylene fatty acid glycerides and oils, for example polyoxyethylene (8) caprylic/capric mono- and diglycerides (e.g., Labrasol<sup>TM</sup> of Gattefosse), polyoxyethylene (35) castor oil and polyoxyethylene (40) hydrogenated castor oil; polyoxyethylene alkyl ethers, for example polyoxyethylene (20) cetostearyl ether, polyoxyethylene fatty acid esters, for example polyoxyethylene (40) stearate, polyoxyethylene sorbitan esters, for example polysorbate 20 and polysorbate 80 (e.g., Tween<sup>TM</sup> 80 of ICI), propylene glycol fatty acid esters, for example propylene glycol laurate (e.g., Lauroglycol<sup>TM</sup> of Gattefosse), sodium lauryl sulfate, fatty acids and salts thereof, for example oleic acid, sodium

oleate and triethanolamine oleate, glyceryl fatty acid esters, for example glyceryl monostearate, sorbitan esters, for example sorbitan monolaurate, sorbitan monooleate, sorbitan monopalmitate and sorbitan monostearate, tyloxapol, and mixtures thereof. Such wetting agents, if present, constitute in total about 0.25% to about 15%, preferably about 0.4% to about 10%, and more preferably about 0.5% to about 5%, of the total weight of the pharmaceutical composition.

Wetting agents that are anionic surfactants are preferred. Sodium lauryl sulfate is a particularly preferred wetting agent. Sodium lauryl sulfate, if present, constitutes about 0.25% to about 7%, more preferably about 0.4% to about 4%, and still more preferably about 0.5% to about 2%, of the total weight of the pharmaceutical composition.

Pharmaceutical compositions of the invention optionally comprise one or more pharmaceutically acceptable lubricants (including anti-adherents and/or glidants) as excipients. Suitable lubricants include, but are not limited to, either individually or in combination, glyceryl behapate (e.g., Compritol<sup>TM</sup> 888 of Gattefosse); stearic acid and salts thereof, including magnesium, calcium and sodium stearates; hydrogenated vegetable oils (e.g., Sterotex<sup>TM</sup> of Abitec); colloidal silica; talc; waxes; boric acid; sodium benzoate; sodium acetate; sodium fumarate; sodium chloride; DL-leucine; PEG (e.g., Carbowax<sup>TM</sup> 4000 and Carbowax<sup>TM</sup> 6000 of the Dow Chemical Company); sodium oleate; sodium lauryl sulfate; and magnesium lauryl sulfate. Such lubricants, if present, constitute in total about 0.1% to about 10%, preferably about 0.2% to about 8%, and more preferably about 0.25% to about 5%, of the total weight of the pharmaceutical composition.

Magnesium stearate is a preferred lubricant used, for example, to reduce friction between the equipment and granulated mixture during compression of tablet formulations.

Suitable anti-adherents include, but are not limited to, talc, cornstarch, DL-leucine, sodium lauryl sulfate and metallic stearates. Talc is a preferred anti-adherent or glidant used, for example, to reduce formulation sticking to equipment surfaces and also to reduce static in the blend. Talc, if present, constitutes about 0.1% to about 10%, more preferably about 0.25% to about 5%, and still more preferably about 0.5% to about 2%, of the total weight of the pharmaceutical composition.

Glidants can be used to promote powder flow of a solid formulation. Suitable glidants include, but are not limited to, colloidal silicon dioxide, starch, talc, tribasic



calcium phosphate, powdered cellulose and magnesium trisilicate. Colloidal silicon dioxide is particularly preferred.

Other excipients such as colorants, flavors and sweeteners are known in the pharmaceutical art and can be used in pharmaceutical compositions of the present invention. Tablets can be coated, for example with an enteric coating, or uncoated. Compositions of the invention can further comprise, for example, buffering agents.

Optionally, one or more effervescent agents can be used as disintegrants and/or to enhance organoleptic properties of pharmaceutical compositions of the invention. When present in pharmaceutical compositions of the invention to promote dosage form disintegration, one or more effervescent agents are preferably present in a total amount of about 30% to about 75%, and preferably about 45% to about 70%, for example about 60%, by weight of the pharmaceutical composition.

According to a particularly preferred embodiment of the invention, an effervescent agent, present in a solid dosage form in an amount less than that effective to promote disintegration of the dosage form, provides improved dispersion of the API in an aqueous medium. Without being bound by theory, it is believed that the effervescent agent is effective to accelerate dispersion of the API from the dosage form in the gastrointestinal tract, thereby further enhancing absorption and rapid onset of therapeutic effect. When present in a pharmaceutical composition of the invention to promote intragastric dispersion but not to enhance disintegration, an effervescent agent is preferably present in an amount of about 1% to about 20%, more preferably about 2.5% to about 15%, and still more preferably about 5% to about 10%, by weight of the pharmaceutical composition.

An "effervescent agent" herein is an agent comprising one or more compounds which, acting together or individually, evolve a gas on contact with water. The gas evolved is generally oxygen or, most commonly, carbon dioxide. Preferred effervescent agents comprise an acid and a base that react in the presence of water to generate carbon dioxide gas. Preferably, the base comprises an alkali metal or alkaline earth metal carbonate or bicarbonate and the acid comprises an aliphatic carboxylic acid.

Non-limiting examples of suitable bases as components of effervescent agents useful in the invention include carbonate salts (e.g., calcium carbonate), bicarbonate salts (e.g., sodium bicarbonate), sesquicarbonate salts, and mixtures thereof. Calcium carbonate is a preferred base.

Non-limiting examples of suitable acids as components of effervescent agents and/or solid organic acids useful in the invention include citric acid, tartaric acid (as D-, L-, or D/L-tartaric acid), malic acid (as D-, L-, or DL-malic acid), maleic acid, fumaric acid, adipic acid, succinic acid, acid anhydrides of such acids, acid salts of such acids, and mixtures thereof. Citric acid is a preferred acid.

In a preferred embodiment of the invention, where the effervescent agent comprises an acid and a base, the weight ratio of the acid to the base is about 1:100 to about 100:1, more preferably about 1:50 to about 50:1, and still more preferably about 1:10 to about 10:1. In a further preferred embodiment of the invention, where the effervescent agent comprises an acid and a base, the ratio of the acid to the base is approximately stoichiometric.

Excipients which solubilize APIs typically have both hydrophilic and hydrophobic regions, or are preferably amphiphilic or have amphiphilic regions. One type of amphiphilic or partially-amphiphilic excipient comprises an amphiphilic polymer or is an amphiphilic polymer. A specific amphiphilic polymer is a polyalkylene glycol, which is commonly comprised of ethylene glycol and/or propylene glycol subunits. Such polyalkylene glycols can be esterified at their termini by a carboxylic acid, ester, acid anhydride or other suitable moiety. Examples of such excipients include poloxamers (symmetric block copolymers of ethylene glycol and propylene glycol; e.g., poloxamer 237), polyalkylene glycolated esters of tocopherol (including esters formed from a di- or multi-functional carboxylic acid; e.g., d-alpha-tocopherol polyethylene glycol-1000 succinate), and macroglycerides (formed by alcoholysis of an oil and esterification of a polyalkylene glycol to produce a mixture of mono-, di- and tri-glycerides and mono- and di-esters; e.g., stearyl macrogol-32 glycerides). Such pharmaceutical compositions are advantageously administered orally.

Pharmaceutical compositions of the present invention can comprise about 10 % to about 50 %, about 25 % to about 50 %, about 30 % to about 45 %, or about 30 % to about 35 % by weight of a co-crystal; about 10 % to about 50 %, about 25 % to about 50 %, about 30 % to about 45 %, or about 30 % to about 35 % by weight of an excipient which inhibits crystallization in aqueous solution, in simulated gastric fluid, or in simulated intestinal fluid; and about 5 % to about 50 %, about 10 % to about 40 %, about 15 % to about 35 %, or about 30 % to about 35 % by weight of a binding

agent. In one example, the weight ratio of the co-crystal to the excipient which inhibits crystallization to binding agent is about 1 to 1 to 1.

Solid dosage forms of the invention can be prepared by any suitable process, not limited to processes described herein.

An illustrative process comprises (a) a step of blending an API of the invention with one or more excipients to form a blend, and (b) a step of tableting or encapsulating the blend to form tablets or capsules, respectively.

In a preferred process, solid dosage forms are prepared by a process comprising (a) a step of blending a co-crystal of the invention with one or more excipients to form a blend, (b) a step of granulating the blend to form a granulate, and (c) a step of tableting or encapsulating the blend to form tablets or capsules respectively. Step (b) can be accomplished by any dry or wet granulation technique known in the art, but is preferably a dry granulation step. A salt of the present invention is advantageously granulated to form particles of about 1 micrometer to about 100 micrometer, about 5 micrometer to about 50 micrometer, or about 10 micrometer to about 25 micrometer. One or more diluents, one or more disintegrants and one or more binding agents are preferably added, for example in the blending step, a wetting agent can optionally be added, for example in the granulating step, and one or more disintegrants are preferably added after granulating but before tableting or encapsulating. A lubricant is preferably added before tableting. Blending and granulating can be performed independently under low or high shear. A process is preferably selected that forms a granulate that is uniform in API content, that readily disintegrates, that flows with sufficient ease so that weight variation can be reliably controlled during capsule filling or tableting, and that is dense enough in bulk so that a batch can be processed in the selected equipment and individual doses fit into the specified capsules or tablet dies.

In an alternative embodiment, solid dosage forms are prepared by a process that includes a spray drying step, wherein an API is suspended with one or more excipients in one or more sprayable liquids, preferably a non-protic (e.g., non-aqueous or non-alcoholic) sprayable liquid, and then is rapidly spray dried over a current of warm air.

A granulate or spray dried powder resulting from any of the above illustrative processes can be compressed or molded to prepare tablets or encapsulated to prepare capsules. Conventional tableting and encapsulation techniques known in the art can

be employed. Where coated tablets are desired, conventional coating techniques are suitable.

Excipients for tablet compositions of the invention are preferably selected to provide a disintegration time of less than about 30 minutes, preferably about 25 minutes or less, more preferably about 20 minutes or less, and still more preferably about 15 minutes or less, in a standard disintegration assay.

Pharmaceutically acceptable co-crystals can be administered by controlled- or delayed-release means. Controlled-release pharmaceutical products have a common goal of improving drug therapy over that achieved by their non-controlled release counterparts. Ideally, the use of an optimally designed controlled-release preparation in medical treatment is characterized by a minimum of drug substance being employed to cure or control the condition in a minimum amount of time. Advantages of controlled-release formulations include: 1) extended activity of the drug; 2) reduced dosage frequency; 3) increased patient compliance; 4) usage of less total drug; 5) reduction in local or systemic side effects; 6) minimization of drug accumulation; 7) reduction in blood level fluctuations; 8) improvement in efficacy of treatment; 9) reduction of potentiation or loss of drug activity; and 10) improvement in speed of control of diseases or conditions. Kim, Cherng-ju, *Controlled Release Dosage Form Design*, 2 (Technomic Publishing, Lancaster, Pa.: 2000).

Conventional dosage forms generally provide rapid or immediate drug release from the formulation. Depending on the pharmacology and pharmacokinetics of the drug, use of conventional dosage forms can lead to wide fluctuations in the concentrations of the drug in a patient's blood and other tissues. These fluctuations can impact a number of parameters, such as dose frequency, onset of action, duration of efficacy, maintenance of therapeutic blood levels, toxicity, side effects, and the like. Advantageously, controlled-release formulations can be used to control a drug's onset of action, duration of action, plasma levels within the therapeutic window, and peak blood levels. In particular, controlled- or extended-release dosage forms or formulations can be used to ensure that the maximum effectiveness of a drug is achieved while minimizing potential adverse effects and safety concerns, which can occur both from under dosing a drug (i.e., going below the minimum therapeutic levels) as well as exceeding the toxicity level for the drug.

Most controlled-release formulations are designed to initially release an amount of drug (active ingredient) that promptly produces the desired therapeutic



effect, and gradually and continually release other amounts of drug to maintain this level of therapeutic or prophylactic effect over an extended period of time. In order to maintain this constant level of drug in the body, the drug must be released from the dosage form at a rate that will replace the amount of drug being metabolized and excreted from the body. Controlled-release of an active ingredient can be stimulated by various conditions including, but not limited to, pH, ionic strength, osmotic pressure, temperature, enzymes, water, and other physiological conditions or compounds.

A variety of known controlled- or extended-release dosage forms, formulations, and devices can be adapted for use with the co-crystals and compositions of the invention. Examples include, but are not limited to, those described in U.S. Pat. Nos.: 3,845,770; 3,916,899; 3,536,809; 3,598,123; 4,008,719; 5,674,533; 5,059,595; 5,591,767; 5,120,548; 5,073,543; 5,639,476; 5,354,556; 5,733,566; and 6,365,185 B1; each of which is incorporated herein by reference. These dosage forms can be used to provide slow or controlled-release of one or more active ingredients using, for example, hydroxypropylmethyl cellulose, other polymer matrices, gels, permeable membranes, osmotic systems (such as OROS® (Alza Corporation, Mountain View, Calif. USA)), multilayer coatings, microparticles, liposomes, or microspheres or a combination thereof to provide the desired release profile in varying proportions. Additionally, ion exchange materials can be used to prepare immobilized, adsorbed co-crystals and thus effect controlled delivery of the drug. Examples of specific anion exchangers include, but are not limited to, Duolite® A568 and Duolite® AP143 (Rohm & Haas, Spring House, PA. USA).

One embodiment of the invention encompasses a unit dosage form which comprises a pharmaceutically acceptable co-crystal, or a solvate, hydrate, dehydrate, anhydrous, or amorphous form thereof, and one or more pharmaceutically acceptable excipients or diluents, wherein the pharmaceutical composition or dosage form is formulated for controlled-release. Specific dosage forms utilize an osmotic drug delivery system.

A particular and well-known osmotic drug delivery system is referred to as OROS® (Alza Corporation, Mountain View, Calif. USA). This technology can readily be adapted for the delivery of compounds and compositions of the invention. Various aspects of the technology are disclosed in U.S. Pat. Nos. 6,375,978 B1;

6,368,626 B1; 6,342,249 B1; 6,333,050 B2; 6,287,295 B1; 6,283,953 B1; 6,270,787 B1; 6,245,357 B1; and 6,132,420; each of which is incorporated herein by reference. Specific adaptations of OROS® that can be used to administer compounds and compositions of the invention include, but are not limited to, the OROS® Push-Pull™, Delayed Push-Pull™, Multi-Layer Push-Pull™, and Push-Stick™ Systems, all of which are well known. See, e.g., <http://www.alza.com>. Additional OROS® systems that can be used for the controlled oral delivery of compounds and compositions of the invention include OROS®-CT and L-OROS®. Id.; see also, Delivery Times, vol. II, issue II (Alza Corporation).

Conventional OROS® oral dosage forms are made by compressing a drug powder (e.g. co-crystal) into a hard tablet, coating the tablet with cellulose derivatives to form a semi-permeable membrane, and then drilling an orifice in the coating (e.g., with a laser). Kim, Cherng-ju, Controlled Release Dosage Form Design, 231-238 (Technomic Publishing, Lancaster, Pa.: 2000). The advantage of such dosage forms is that the delivery rate of the drug is not influenced by physiological or experimental conditions. Even a drug with a pH-dependent solubility can be delivered at a constant rate regardless of the pH of the delivery medium. But because these advantages are provided by a build-up of osmotic pressure within the dosage form after administration, conventional OROS® drug delivery systems cannot be used to effectively deliver drugs with low water solubility. Id. at 234. Because co-crystals of this invention can be far more soluble in water than the API itself, they are well suited for osmotic-based delivery to patients. This invention does, however, encompass the incorporation of conventional crystalline API (e.g. pure API without co-crystal former), and non-salt isomers and isomeric mixtures thereof, into OROS® dosage forms.

A specific dosage form of the invention comprises: a wall defining a cavity, the wall having an exit orifice formed or formable therein and at least a portion of the wall being semipermeable; an expandable layer located within the cavity remote from the exit orifice and in fluid communication with the semipermeable portion of the wall; a dry or substantially dry state drug layer located within the cavity adjacent to the exit orifice and in direct or indirect contacting relationship with the expandable layer; and a flow-promoting layer interposed between the inner surface of the wall and at least the external surface of the drug layer located within the cavity, wherein

the drug layer comprises a co-crystal, or a solvate, hydrate, dehydrate, anhydrous, or amorphous form thereof. See U.S. Pat. No. 6,368,626, the entirety of which is incorporated herein by reference.

Another specific dosage form of the invention comprises: a wall defining a cavity, the wall having an exit orifice formed or formable therein and at least a portion of the wall being semipermeable; an expandable layer located within the cavity remote from the exit orifice and in fluid communication with the semipermeable portion of the wall; a drug layer located within the cavity adjacent the exit orifice and in direct or indirect contacting relationship with the expandable layer; the drug layer comprising a liquid, active agent formulation absorbed in porous particles, the porous particles being adapted to resist compaction forces sufficient to form a compacted drug layer without significant exudation of the liquid, active agent formulation, the dosage form optionally having a placebo layer between the exit orifice and the drug layer, wherein the active agent formulation comprises a co-crystal, or a solvate, hydrate, dehydrate, anhydrous, or amorphous form thereof. See U.S. Pat. No. 6,342,249, the entirety of which is incorporated herein by reference.

The invention will now be described in further detail, by way of example, with reference to the accompanying drawings.

## EXEMPLIFICATION

### General Methods for the Preparation of Co-Crystals

#### a) High Throughput crystallization using the CrystalMax platform

CrystalMax™ comprises a sequence of automated, integrated high throughput robotic stations capable of rapid generation, identification and characterization of polymorphs, salts, and co-crystals of APIs and API candidates. Worksheet generation and combinatorial mixture design is carried out using proprietary design software InForm™. Typically, an API or an API candidate is dispensed from an organic solvent into tubes and dried under a stream of nitrogen. Salts and/or co-crystal formers may also be dispensed and dried in the same fashion. Water and organic solvents may be combinatorially dispensed into the tubes using a multi-channel dispenser. Each tube in a 96-tube array is then sealed within 15 seconds of combinatorial dispensing to avoid solvent evaporation. The mixtures are then

rendered supersaturated by heating to 70 degrees C for 2 hours followed by a 1 degree C/minute cooling ramp to 5 degrees C. Optical checks are then conducted to detect crystals and/or solid material. Once a solid has been identified in a tube, it is isolated through aspiration and drying. Raman spectra are then obtained on the solids and cluster classification of the spectral patterns is performed using proprietary software (QForm™).

b) Crystallization from solution

Co-crystals may be obtained by dissolving the separate components in a solvent and adding one to the other. The co-crystal may then precipitate or crystallize as the solvent mixture is evaporated slowly. The co-crystal may also be obtained by dissolving the two components in the same solvent or a mixture of solvents.

c) Crystallization from the melt

A co-crystal may be obtained by melting the two components together and allowing recrystallization to occur. In some cases, an anti-solvent may be added to facilitate crystallization.

d) Thermal microscopy

A co-crystal may be obtained by melting the higher melting component on a glass slide and allowing it to recrystallize. The second component is then melted and is also allowed to recrystallize. The co-crystal may form as a separated phase/band in between the eutectic bands of the two original components.

e) Mixing and/or grinding

A co-crystal may be obtained by mixing or grinding two components together in the solid state.

## Analytical Methods

### Procedure for DSC analysis

DSC analysis of the samples was performed using a Q1000 Differential Scanning Calorimeter (TA Instruments, New Castle, DE, U.S.A.), which uses Advantage for QW-Series, version 1.0.0.78, Thermal Advantage Release 2.0 (©2001 TA Instruments-Water LLC). In addition, the analysis software used was Universal Analysis 2000 for Windows 95/95/2000/NT, version 3.1E;Build 3.1.0.40 (©2001 TA Instruments-Water LLC).



For the DSC analysis, the purge gas used was dry nitrogen, the reference material was an empty aluminum pan that was crimped, and the sample purge was 50 mL/minute.

DSC analysis of the sample was performed by placing  $\leq 2$  mg of sample in an aluminum pan with a crimped pan closure. The starting temperature was typically 20 degrees C with a heating rate of 10 degrees C/minute, and the ending temperature was 300 degrees C. Unless otherwise indicated, all reported transitions are as stated  $\pm 1.0$  degrees C.

#### Procedure for TGA analysis

TGA analysis of samples was performed using a Q500 Thermogravimetric Analyzer (TA Instruments, New Castle, DE, U.S.A.), which uses Advantage for QW-Series, version 1.0.0.78, Thermal Advantage Release 2.0 (<sup>8</sup>2001 TA Instruments-Water LLC). In addition, the analysis software used was Universal Analysis 2000 for Windows 95/95/2000/NT, version 3.1E; Build 3.1.0.40 (<sup>8</sup>2001 TA Instruments-Water LLC).

For all of the TGA experiments, the purge gas used was dry nitrogen, the balance purge was 40 mL/minute N<sub>2</sub>, and the sample purge was 60 mL/minute N<sub>2</sub>.

TGA of the sample was performed by placing  $\leq 2$  mg of sample in a platinum pan. The starting temperature was typically 20 degrees C with a heating rate of 10 degrees C/minute, and the ending temperature was 300 degrees C.

#### Procedure for PXRD analysis

A powder X-ray diffraction pattern for the samples was obtained using a D/Max Rapid, Contact (Rigaku/MS, The Woodlands, TX, U.S.A.), which uses as its control software RINT Rapid Control software, Rigaku Rapid/XRD, version 1.0.0 (<sup>8</sup>1999 Rigaku Co.). In addition, the analysis software used were RINT Rapid display software, version 1.18 (Rigaku/MS), and JADE XRD Pattern Processing, versions 5.0 and 6.0 (<sup>8</sup>1995-2002, Materials Data, Inc.).

For the PXRD analysis, the acquisition parameters were as follows: source was Cu with a K line at 1.5406Å; x-y stage was manual; collimator size was 0.3 or 0.8 mm; capillary tube (Charles Supper Company, Natick, MA, U.S.A.) was 0.3 mm ID; reflection mode was used; the power to the X-ray tube was 46 kV; the current to the X-ray tube was 40 mA; the omega-axis was oscillating in a range of 0-5 degrees at a speed of 1 degree/minute; the phi-axis was spinning at an angle of 360 degrees at a speed of 2 degrees/second; 0.3 or 0.8 mm collimator; the collection time was 60 minutes; the temperature was room temperature; and the heater was not used. The sample was presented to the X-ray source in a boron rich glass capillary.

In addition, the analysis parameters were as follows: the integration 2-theta range was 2-40 or 60 degrees; the integration chi range was 0-360 degrees; the number of chi segments was 1; the step size used was 0.02; the integration utility was cylint; normalization was used; dark counts were 8; omega offset was 180; and chi and phi offsets were 0.

The relative intensity of peaks in a diffractogram is not necessarily a limitation of the PXRD pattern because peak intensity can vary from sample to sample, e.g., due to crystalline impurities. Further, the angles of each peak can vary by about +/- 0.1 degrees, preferably +/-0.05. The entire pattern or most of the pattern peaks may also shift by about +/- 0.1 degree due to differences in calibration, settings, and other variations from instrument to instrument and from operator to operator.

#### Procedure for Raman Acquisition, Filtering and Binning

##### *Acquisition*

The sample was either left in the glass vial in which it was processed or an aliquot of the sample was transferred to a glass slide. The glass vial or slide was positioned in the sample chamber. The measurement was made using an Almega™ Dispersive Raman (Almega™ Dispersive Raman, Thermo-Nicolet, 5225 Verona Road, Madison, WI 53711-4495) system fitted with a 785nm laser source. The sample was manually brought into focus using the microscope portion of the apparatus with a 10x power objective (unless otherwise noted), thus directing the laser onto the surface of the sample. The spectrum was acquired using the parameters outlined in Table A.

(Exposure times and number of exposures may vary; changes to parameters will be indicated for each acquisition.)

### *Filtering and Binning*

Each spectrum in a set was filtered using a matched filter of feature size 25 to remove background signals, including glass contributions and sample fluorescence. This is particularly important as large background signal or fluorescence limit the ability to accurately pick and assign peak positions in the subsequent steps of the binning process. Filtered spectra were binned using the peak pick and bin algorithm with the parameters given in Table B. The sorted cluster diagrams for each sample set and the corresponding cluster assignments for each spectral file were used to identify groups of samples with similar spectra, which was used to identify samples for secondary analyses.

Table A. Raman Spectral acquisition parameters

Parameter	Setting Used
Exposure time (s)	2.0
Number of exposures	10
Laser source wavelength (nm)	785
Laser power (%)	100
Aperture shape	pin hole
Aperture size (um)	100
Spectral range	104-3428
Grating position	Single
Temperature at acquisition (degrees C)	24.0

Table B. Raman Filtering and Binning Parameters

Parameter	Setting Used
<i>Filtering Parameters</i>	
Filter type	Matched
Filter size	25
<i>QC Parameters</i>	
Peak Height Threshold	1000
Region for noise test (cm <sup>-1</sup> )	0-10000
RMS noise threshold	10000
Automatically eliminate failed spectra	Yes
<i>Region of Interest</i>	
Include (cm <sup>-1</sup> )	104-3428

Exclude region I ( $\text{cm}^{-1}$ )	
Exclude region II ( $\text{cm}^{-1}$ )	
Exclude region III ( $\text{cm}^{-1}$ )	
Exclude region IV ( $\text{cm}^{-1}$ )	
<i>Peak Pick Parameters</i>	
Peak Pick Sensitivity	Variable
Peak Pick Threshold	100
<i>Peak Comparison Parameters</i>	
Peak Window ( $\text{cm}^{-1}$ )	2
<i>Analysis Parameters</i>	
Number of clusters	Variable

#### Procedure for Single Crystal X-Ray Diffraction

Single crystal x-ray data were collected on a Bruker SMART-APEX CCD diffractometer (M. J. Zawarotko, Department of Chemistry, University of South Florida). Lattice parameters were determined from least squares analysis. Reflection data was integrated using the program SAINT. The structure was solved by direct methods and refined by full matrix least squares using the program SHELXTL (Sheldrick, G. M. SHELXTL, Release 5.03; Siemens Analytical X-ray Instruments Inc.: Madison, WI).

The co-crystals of the present invention can be characterized, e.g., by the TGA or DSC data or by any one, any two, any three, any four, any five, any six, any seven, any eight, any nine, any ten, or any single integer number of PXRD 2-theta angle peaks or Raman shift peaks listed herein or disclosed in a figure, or by single crystal x-ray diffraction data.

#### Example 1

1:1 carbamazepine:saccharin co-crystals (Form I) were prepared. A 12-block experiment was designed with 12 solvents. 1152 crystallization experiments were carried out using the CMAX platform. The co-crystal was obtained from a mixture of isopropyl acetate and heptane. Detailed characterization of the co-crystal is listed in Table V. (See Figs. 1 and 2)



**Example 2**

1:1 carbamazepine:nicotinamide co-crystals (Form I) were prepared. A 12-block experiment was designed with 12 solvents. 1152 crystallization experiments were carried out using the CMAX platform. The co-crystal was obtained from samples containing toluene, acetone, or isopropyl acetate. Detailed characterization of the co-crystal is listed in Table V. (See Figs. 3 and 4)

**Example 3**

1:1 carbamazepine:trimesic acid co-crystals (Form I) were prepared. A 9-block experiment was designed with 10 solvents. 864 crystallization experiments with 8 co-crystal formers and 3 concentrations were carried out using the CMAX platform. The co-crystal was obtained from samples containing methanol. Detailed characterization of the co-crystal is listed in Table V. (See Fig. 5)

**Example 4**

1:1 celecoxib:nicotinamide co-crystals were prepared. Celecoxib (100 mg, 0.26 mmol) and nicotinamide (32.0 mg, 0.26 mmol) were each dissolved in acetone (2 mL). The two solutions were mixed and the resulting mixture was allowed to evaporate slowly overnight. The precipitated solid was collected and characterized. Detailed characterization of the co-crystal is listed in Table V.

**Example 5**

Co-crystals of topiramate and 18-crown-6 were prepared. An equimolar amount of topiramate and 18-crown-6 were dissolved in ether separately. The solution containing topiramate was then added to the solution containing 18-crown-6. A white solid precipitated after minor agitation and was collected and dried. Detailed characterization of the co-crystal is listed in Table V. (See Figs. 6 and 7)

**Example 6**

Co-crystals of olanzapine and nicotinamide (Form I and II) were prepared. A 9-block experiment was designed with 12 solvents. 864 crystallization experiments with 10 co-crystal formers and 3 concentrations were carried out using the CMAX platform. The co-crystal was obtained from tubes containing isopropyl acetate. PXRD and

DSC characterization of the co-crystal (Form I and II) is listed in Table V. (See Figs. 8, 9, and 30)

#### Example 7

Co-crystals of celecoxib and 18-crown-6 were prepared. A solution of celecoxib (157.8 mg, 0.4138 mmol) in Et<sub>2</sub>O (10.0 mL) was added to 18-crown-6 (118.1 mg, 0.447 mmol). The opaque solid dissolves immediately and a white solid subsequently began to crystallize very rapidly. The solid was collected via filtration and was washed with additional Et<sub>2</sub>O (5 mL). Detailed characterization of the co-crystal is listed in Table V. (See Figs. 10 and 11)

#### Example 8

Co-crystals of itraconazole and succinic acid were prepared. Approximately 51.1 mg of *cis*-itraconazole free base, 0.75 mL of THF, and a magnetic stir bar were charged into a screw cap vial, heated to reflux to dissolve, and then the vial was closed with the screw cap and placed on top of a hot plate maintained at a temperature between 60 and 75 degrees C. A solution of 77.7 mg of succinic acid in 1.58 mL of THF was prepared. 0.20 mL of the succinic acid solution was added to the *cis*-itraconazole solution and the solution remained clear. 0.75 mL of iso-propylacetate was added and the solution was seeded with <1 mg of the L-tartaric acid co-crystal salt from Example 10 below. The heat was turned off and the sample crystallized as it cooled to room temperature. The cooled sample was suction filtered. It was rinsed with 0.2-0.3 mL of THF. The filter cake was broken-up and allowed to air-dry for 1 hour prior to analysis. (See Figs. 12 and 13)

#### Example 9

Co-crystals of itraconazole and fumaric acid were prepared. Approximately 500 mg of *cis*-itraconazole free base was placed in a 50 mL screw top bottle along with 33.33 mL of tetrahydrofuran (THF). 3.0887 mL of fumaric acid stock solution (prepared in Example 1) was then added to the beaker (resulting in a 1.05:1 ratio of salt former to free base). The cap was screwed on to seal the bottle and the bottle was placed in a 70 degrees C oven (Model # 1400E, VWR Scientific) and heated for approximately 1 hour. Thereafter, the bottle was removed from the oven, the cap from the bottle was removed, and the sample was allowed to evaporate under flowing

air under ambient conditions. When all but about 5 mL of the solvent had evaporated, the remaining solvent was removed by decantation and the solid was isolated by filtering over a Whatman filter using suction. This solid was returned back into the 50 mL bottle with the remaining solid and the bottle was placed into the vacuum oven at approximately 25 mm Hg and the solid was allowed to dry for 4 days prior to analysis. (See Figs. 14 and 15)

#### Example 10

Co-crystals of itraconazole and tartaric acid were prepared. Approximately 100.4 mg of *cis*-itraconazole free base, 0.90 mL of THF, and a magnetic stir bar were charged into a screw cap vial, heated to reflux to dissolve, and then the vial was closed with the screw cap and placed in an oil bath maintained at 70 degrees C. A solution of 138.5 mg of L(+) tartaric acid in 1.15 mL of THF was prepared. 0.21 mL of the L(+)tartaric acid solution was added to the *cis*-itraconazole solution and the solution remained clear. 0.90 mL of iso-propylacetate was added and the solution was seeded with <1 mg of the salt from a preparation of DL-tartaric acid co-crystal. The sample was allowed to crystallize over about 5 minutes in the 70 degrees C oil bath before it was removed and allowed to cool to room temperature. The cooled sample was suction filtered. It was rinsed with 0.2-0.3 mL of THF. The filter cake was broken-up and allowed to air-dry for 4 hours prior to analysis. (See Figs. 16 and 17)

#### Example 11

Co-crystals of itraconazole and malic acid were prepared. To prepare the L-malic acid co-crystal salt of *cis*-itraconazole, 100.4 mg of *cis*-itraconazole free base, 0.50 mL of THF, and a magnetic stir bar were charged into a screw cap vial. A solution of 191.3 mg of L(-)malic acid in 5.0 mL of THF was prepared. 0.50 mL of the L-malic acid solution was added to the vial containing *cis*-itraconazole and the solution was heated with a heat gun to dissolve. The solution was allowed to cool and was then seeded with <1 mg of the salt from *cis*-itraconazole-L-tartaric acid co-crystal. The cooled crystals were filtered in a centrifuge filter tube. The filter cake was broken-up and allowed to air-dry prior to analysis. (See Figs. 18 and 19)

#### Example 12

Co-crystals of itraconazole HCl and tartaric acid were prepared. Approximately 212.7mg of L-tartaric acid and 118 microL of 37% HCl were dissolved in 25 mL of hot dioxane. This solution was added to 1.0 g of *cis*-itraconazole dissolved in 50 mL of hot dioxane with stirring. The mixture was heated until a clear solution formed and was then allowed to cool to room temperature. Upon cooling, 50 mL tert-butyl methyl ether was added and the crystals were harvested by vacuum filtration on a Buchner funnel with #4 Whatman filter paper. The crystals were washed 3 times with 5 mL aliquots of cold tert-butyl methyl ether and left to air dry. Approximately 573 mg of a crystalline form of *cis*-itraconazole HCl-tartaric acid (1:1:0.5) co-crystal were obtained. (See Figs. 20 and 21)

#### Example 13

Co-crystals of modafinil and malonic acid were prepared. Using a 250 mg/ml modafinil-acetic acid solution, malonic acid was dissolved on a hotplate (about 67 degrees C) at a 1:2 modafinil to malonic acid ratio. The mixture was dried under flowing nitrogen overnight. A powdery white solid was produced. After further drying for 1 day, acetic acid is removed (as determined by TGA) and the crystal structure, as determined by PXRD, remains the same. (See Fig. 22)

#### Example 14

Co-crystals of modafinil and benzamide were prepared. Modafinil (1 mg, 0.0037mmol) and benzamide (0.45 mg, 0.0037 mmol) were dissolved in 1,2-dichloroethane (400 microL). The solution was allowed to evaporate to dryness and the resulting solid was characterized using PXRD. PXRD data for the co-crystal is listed in Table V. (See Fig. 23)

#### Example 15

Co-crystals of modafinil and mandelic acid were prepared. Modafinil (1 mg, 0.0037mmol) and mandelic acid (0.55 mg, 0.0037 mmol) were dissolved in acetone (400 microL). The solution was allowed to evaporate to dryness and the resulting



solid was characterized using PXRD. PXRD data for the co-crystal is listed in Table V. (See Fig. 24)

#### Example 16

Co-crystals of modafinil and glycolic acid were prepared. Modafinil (1 mg, 0.0037mmol) and glycolic acid (0.30 mg, 0.0037 mmol) were dissolved in acetone (400 microL). The solution was allowed to evaporate to dryness and the resulting solid was characterized using PXRD. PXRD data for the co-crystal is listed in Table V. (See Fig. 25)

#### Example 17

Co-crystals of modafinil and fumaric acid were prepared. Modafinil (1 mg, 0.0037mmol) and fumaric acid (0.42 mg, 0.0037 mmol) were dissolved in 1,2-dichloroethane (400 microL). The solution was allowed to evaporate to dryness and the resulting solid was characterized using PXRD. PXRD data for the co-crystal is listed in Table V. (See Fig. 26)

#### Example 18

Co-crystals of modafinil and maleic acid were prepared. Using a 250 mg/ml modafinil-acetic acid solution, maleic acid was dissolved on a hotplate (about 67 degrees C) at a 2:1 modafinil to maleic ratio. The mixture was dried under flowing nitrogen overnight. A clear amorphous material remained. Solids began to grow after 2 days stored in a sealed vial at room temperature. (See Fig. 43)

#### Example 19

Co-crystals of olanzapine and nicotinamide (Form III) were prepared. Olanzapine (40  $\mu$ L of 25 mg/mL stock solution in tetrahydrofuran) and nicotinamide (37.6  $\mu$ L of 20 mg/mL stock solution in methanol) were added to a glass vial and dried under a flow of nitrogen. To the solid mixture was added isopropyl acetate (100  $\mu$ L) and the vial was sealed with an aluminum cap. The suspension was then heated at 70 degrees C for two hours in order to dissolve all of the solid material. The solution was then cooled to 5 degrees C and maintained at that temperature for 24 hours. After 24 hours the vial was uncapped and the mixture was concentrated to 50  $\mu$ L of total volume. The vial was then resealed with an aluminum cap and was maintained at 5 degrees C

for an additional 24 hours. Large, yellow plates were observed and were collected (Form III). The solid was characterized with single crystal x-ray diffraction and powder x-ray diffraction. PXRD characterization of the co-crystal is listed in Table V. (See Fig. 31 and 32A-D)

Single crystal x-ray analysis reveals that the olanzapine:nicotinamide (Form III) co-crystal is made up of a ternary system containing olanzapine, nicotinamide, water and isopropyl acetate in the unit cell. The co-crystal crystallizes in the monoclinic space group  $P2_1/c$  and contains one olanzapine, one nicotinamide, 4 waters and one isopropyl acetate solvate in the asymmetric unit. The packing diagram is made up of a two-dimensional hydrogen-bonded network with the water molecules connecting the olanzapine and nicotinamide moieties. The packing diagram is also comprised of alternating olanzapine and nicotinamide layers connected through hydrogen bonding via the water and isopropyl acetate molecules, as shown in Figure 32B. The olanzapine layer propagates along the b axis at  $c/4$  and  $3c/4$ . The nicotinamide layer propagates along the b axis at  $c/2$ . The top of Figure 32C illustrates the nicotinamide superstructure. The nicotinamide molecules form dimers which hydrogen bond to chains of 4 water molecules. The water chains terminate with isopropyl acetate molecules on each side.

Crystal data:  $C_{45}H_{64}N_{10}O_7S_2$ ,  $M = 921.18$ , monoclinic  $P2_1/c$ ;  $a = 14.0961(12)$  Å,  $b = 12.5984(10)$  Å,  $c = 27.219(2)$  Å,  $\alpha = 90^\circ$ ,  $\beta = 97.396(2)^\circ$ ,  $\gamma = 90^\circ$ ,  $T = 100(2)$  K,  $Z = 4$ ,  $D_c = 1.276$  Mg/m<sup>3</sup>,  $U = 4793.6(7)$  Å<sup>3</sup>,  $\lambda = 0.71073$  Å; 24952 reflections measured, 8457 unique ( $R_{int} = 0.0882$ ). Final residuals were  $R_1 = 0.0676$ ,  $wR_2 = 0.1461$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.1187$ ,  $wR_2 = 0.1687$  for all 8457 data.

#### Example 20

Co-crystals of 5-fluorouracil and urea were prepared. To 5-fluorouracil (1g, 7.69 mmol) and urea (0.46g, 7.69 mmol) was added methanol (100 mL). The solution was heated at 65 degrees C and sonicated until all the material dissolved. The solution was then cooled to 5 degrees C and maintained at that temperature overnight. After about 3 days a white precipitate was observed and collected. The solid was characterized by DSC, PXRD, Raman spectroscopy, and TGA. Characterization data are listed in Table V. (See Figs. 33- 36)

### Example 21

Co-crystals of hydrochlorothiazide and nicotinic acid were prepared.

Hydrochlorothiazide (12.2 mg, 0.041 mmol) and nicotinic acid (5 mg, 0.041 mmol) were dissolved in methanol (1 mL). The solution was then cooled to 5 degrees C and maintained at that temperature for 12 hours. A white solid precipitated and was collected and characterized using PXRD. (See Fig. 37)

### Example 22

Co-crystals of hydrochlorothiazide and 18-crown-6 were prepared.

Hydrochlorothiazide (100 mg, 0.33 mmol) was dissolved in diethyl ether (15 mL) and was added to a solution of 18-crown-6 (87.2 mg, 0.33 mmol) in diethyl ether (15 mL). A white precipitate immediately began to form and was collected and characterized as the hydrochlorothiazide:18-crown-6 co-crystal using PXRD. (See Fig. 38)

### Example 23

Co-crystals of hydrochlorothiazide and piperazine were prepared.

Hydrochlorothiazide (17.3 mg, 0.058 mmol) and piperazine (5 mg, 0.058 mmol) were dissolved in a 1:1 mixture of ethyl acetate and acetonitrile (1 mL). The solution was then cooled to 5 degrees C and maintained at that temperature for 12 hours. A white solid precipitated and was collected and characterized using PXRD. (See Fig. 39)

### Example 24

Acetaminophen:4,4'-bipyridine:water (1:1:1 stoichiometry)

50 mg (0.3307 mmol) acetaminophen and 52 mg (0.3329 mmol) 4,4'-bipyridine were dissolved in hot water and allowed to stand. Slow evaporation yielded colorless needles of a 1:1:1 acetaminophen/4,4'-bipyridine/water co-crystal, as shown in Figure 44A-B.

Crystal data: (Bruker SMART-APEX CCD Diffractometer).  $C_{36}H_{44}N_2O_4$ ,  $M=339.84$ , triclinic, space group  $P\bar{1}$ ;  $a = 7.0534(8)$ ,  $b = 9.5955(12)$ ,  $c = 19.3649(2)$  Å,  $\alpha = 86.326(2)$ ,  $\beta = 80.291(2)$ ,  $\gamma = 88.880(2)^\circ$ ,  $U = 1208.1(3)$  Å<sup>3</sup>,  $T = 200(2)$  K,  $Z = 2$ ,  $\mu(\text{Mo-K}\alpha) = 0.090$  mm<sup>-1</sup>,  $D_c = 1.294$  Mg/m<sup>3</sup>,  $\lambda = 0.71073$  Å,  $F(000) = 537$ ,  $2\theta_{\text{max}} = 25.02^\circ$ ; 6289 reflections measured, 4481 unique ( $R_{\text{int}} = 0.0261$ ). Final

residuals for 344 parameters were  $R_1 = 0.0751$ ,  $wR_2 = 0.2082$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.1119$ ,  $wR_2 = 0.2377$  for all 4481 data.

**Crystal packing:** The co-crystals contain bilayered sheets in which water molecules act as a hydrogen bonded bridge between the network bipyridine moieties and the acetaminophen. Bipyridine guests are sustained by  $\pi$ - $\pi$  stacking interactions between two network bipyridines. The layers stack via  $\pi$ - $\pi$  interactions between the phenyl groups of the acetaminophen moieties.

**Differential Scanning Calorimetry:** (TA Instruments 2920 DSC), 57.77 degrees C (endotherm); m.p. = 58-60 degrees C (MEL-TEMP); (acetaminophen m.p. = 169 degrees C, 4,4'-bipyridine m.p. = 111-114 degrees C).

#### Example 25

Phenytoin:Pyridone (1:1 stoichiometry)

28 mg (0.1109 mmol) phenytoin and 11 mg (0.1156 mmol) 4-hydroxypyridone were dissolved in 2 mL acetone and 1 mL ethanol with heating and stirring. Slow evaporation yielded colorless needles of a 1:1 phenytoin/pyridone co-crystal, as shown in Figure 45A-B.

**Crystal data:** (Bruker SMART-APEX CCD Diffractometer),  $C_{20}H_{17}N_3O_3$ ,  $M = 347.37$ , monoclinic  $P2_1/c$ ;  $a = 16.6583(19)$ ,  $b = 8.8478(10)$ ,  $c = 11.9546(14)$  Å,  $\beta = 96.618(2)^\circ$ ,  $U = 1750.2(3)$  Å<sup>3</sup>,  $T = 200(2)$  K,  $Z' = 4$ ,  $\mu(\text{Mo-K}\alpha) = 0.091$  mm<sup>-1</sup>,  $D_c = 1.318$  Mg/m<sup>3</sup>,  $\lambda = 0.71073$  Å,  $F(000) = 728$ ,  $2\theta_{\text{max}} = 56.60^\circ$ ; 10605 reflections measured, 4154 unique ( $R_{\text{int}} = 0.0313$ ). Final residuals for 247 parameters were  $R_1 = 0.0560$ ,  $wR_2 = 0.1356$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.0816$ ,  $wR_2 = 0.1559$  for all 4154 data.

**Crystal packing:** The co-crystal is sustained by hydrogen bonding of adjacent phenytoin molecules between the carbonyl and the amine closest to the tetrahedral carbon, and by hydrogen bonding between pyridone carbonyl functionalities and the amine not involved in phenytoin-phenytoin interactions. The pyridone carbonyl also hydrogen bonds with adjacent pyridone molecules forming a one-dimensional network.

**Infrared Spectroscopy:** (Nicolet Avatar 320 FTIR), characteristic peaks for the co-crystal were identified as: 2° amine found at 3311 cm<sup>-1</sup>, carbonyl (ketone) found at 1711 cm<sup>-1</sup>, olephin peak found at 1390 cm<sup>-1</sup>.



Differential Scanning Calorimetry: (TA Instruments 2920 DSC), 233.39 degrees C (endotherm) and 271.33 degrees C (endotherm); m.p. = 231-233 degrees C (MEL-TEMP); (phenytoin m.p. = 295 degrees C, pyridone m.p. = 148 degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA), a 29.09% weight loss starting at 192.80 degrees C, 48.72% weight loss starting at 238.27 degrees C, and 18.38% loss starting at 260.17 degrees C followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using Cu K $\alpha$  ( $\lambda$  = 1.540562), 30kV, 15mA). The powder data were collected over an angular range of 3° to 40° 2 $\theta$  in continuous scan mode using a step size of 0.02° 2 $\theta$  and a scan speed of 2.0°/minute. PXRD: Showed analogous peaks to the simulated PXRD derived from the single crystal data. In all cases of recrystallization and solid state reaction, experimental (calculated): 5.2 (5.3); 11.1 (11.3); 15.1 (15.2); 16.2 (16.4); 16.7 (17.0); 17.8 (17.9); 19.4 (19.4); 19.8 (19.7); 20.3 (20.1); 21.2 (21.4); 23.3 (23.7); 26.1 (26.4); 26.4 (26.6); 27.3 (27.6); 29.5 (29.9).

#### Example 26

Aspirin (acetylsalicylic acid):4,4'-bipyridine (2:1 stoichiometry)

50 mg (0.2775 mmol) aspirin and 22 mg (0.1388 mmol) 4,4'-bipyridine were dissolved in 4 mL hexane. 8 mL ether was added to the solution and allowed to stand for one hour, yielding colorless needles of a 2:1 aspirin/4,4'-bipyridine co-crystal, as shown in Figure 46A-D. Alternatively, aspirin/4,4'-bipyridine (2:1 stoichiometry) can be made by grinding the solid ingredients in a pestle and mortar.

Crystal data: (Bruker SMART-APEX CCD Diffractometer), C<sub>28</sub>H<sub>24</sub>N<sub>2</sub>O<sub>8</sub>, M = 516.49, orthorhombic *Pbcn*; a = 28.831(3), b = 11.3861(12), c = 8.4144(9) Å, U = 2762.2(5) Å<sup>3</sup>, T = 173(2) K, Z = 4,  $\mu$ (Mo-K $\alpha$ ) = 0.092 mm<sup>-1</sup>, D<sub>c</sub> = 1.242 Mg/m<sup>3</sup>,  $\lambda$  = 0.71073 Å, F(000) = 1080, 2 $\theta_{\max}$  = 25.02°; 12431 reflections measured, 2433 unique ( $R_{\text{int}}$  = 0.0419). Final residuals for 202 parameters were  $R_1$  = 0.0419,  $wR_2$  = 0.1358 for I > 2 $\sigma$ (I), and  $R_1$  = 0.0541,  $wR_2$  = 0.1482 for all 2433 data.

Crystal packing: The co-crystal contains the carboxylic acid-pyridine heterodimer that crystallizes in the *Pbcn* space group. The structure is an inclusion compound containing disordered solvent in the channels. In addition to the dominant hydrogen bonding interaction of the heterodimer,  $\pi$ - $\pi$  stacking of the bipyridine and

phenyl groups of the aspirin and hydrophobic interactions contribute to the overall packing interactions.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR), characteristic (-COOH) peak at  $1679\text{ cm}^{-1}$  was shifted up and less intense at  $1694\text{ cm}^{-1}$ , where as the lactone peak is shifted down slightly from  $1750\text{ cm}^{-1}$  to  $1744\text{ cm}^{-1}$ .

Differential Scanning Calorimetry: (TA Instruments 2920 DSC),  $95.14$  degrees C (endotherm); m.p. =  $91-96$  degrees C (MEL-TEMP); (aspirin m.p. =  $1345$  degrees C, 4,4'-bipyridine m.p. =  $111-114$  degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA), weight loss of 9% starting at  $22.62$  degrees C, 49.06% weight loss starting at  $102.97$  degrees C followed by complete decomposition starting at  $209.37$  degrees C.

#### Example 27

Ibuprofen:4,4'-Bipyridine (2:1 stoichiometry)

50 mg (0.242 mmol) racemic ibuprofen and 18mg (0.0960 mmol) 4,4'-bipyridine were dissolved in 5 mL acetone. Slow evaporation of the solvent yielded colorless needles of a 2:1 ibuprofen/4,4'-bipyridine co-crystal, as shown in Figure 47A-D.

Crystal data: (Bruker SMART-APEX CCD Diffractometer),  $\text{C}_{36}\text{H}_{44}\text{N}_2\text{O}_4$ ,  $M = 568.73$ , triclinic, space group  $P-1$ ;  $a = 5.759(3)$ ,  $b = 11.683(6)$ ,  $c = 24.705(11)$  Å,  $\alpha = 93.674(11)$ ,  $\beta = 90.880(10)$ ,  $\gamma = 104.045(7)^\circ$ ,  $U = 1608.3(13)$  Å<sup>3</sup>,  $T = 200(2)$  K,  $Z = 2$ ,  $\mu(\text{Mo-K}\alpha) = 0.076\text{ mm}^{-1}$ ,  $D_c = 1.174\text{ Mg/m}^3$ ,  $\lambda = 0.71073$  Å,  $F(000) = 612$ ,  $2\theta_{\text{max}} = 23.29^\circ$ ; 5208 reflections measured, 3362 unique ( $R_{\text{int}} = 0.0826$ ). Final residuals for 399 parameters were  $R_1 = 0.0964$ ,  $wR_2 = 0.2510$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.1775$ ,  $wR_2 = 0.2987$  for all 3362 data.

Crystal packing: The co-crystal contains ibuprofen/bipyridine heterodimers, sustained by two hydrogen bonded carboxylic acidpyridine supramolecular synthons, arranged in a herringbone motif that packs in the space group  $P-1$ . The heterodimer is an extended version of the homodimer and packs to form a two-dimensional network sustained by  $\pi$ - $\pi$  stacking of the bipyridine and phenyl groups of the ibuprofen and hydrophobic interactions from the ibuprofen tails.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR). Analysis observed stretching of aromatic C-H at  $2899\text{ cm}^{-1}$ ; N-H bending and scissoring at  $1886\text{ cm}^{-1}$ ;

C=O stretching at  $1679\text{ cm}^{-1}$ ; C-H out-of-plane bending for both 4,4'-bipyridine and ibuprofen at  $808\text{ cm}^{-1}$  and  $628\text{ cm}^{-1}$ .

Differential Scanning Calorimetry: (TA Instruments 2920 DSC),  $64.85$  degrees C (endotherm) and  $118.79$  degrees C (endotherm); m.p. =  $113\text{-}120$  degrees C (MEL-TEMP); (ibuprofen m.p. =  $75\text{-}77$  degrees C, 4,4'-bipyridine m.p. =  $111\text{-}114$  degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA),  $13.28\%$  weight loss between room temperature and  $100.02$  degrees C immediately followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using Cu K $\alpha$  ( $\lambda = 1.540562$ ),  $30\text{kV}$ ,  $15\text{mA}$ ). The powder data were collected over an angular range of  $3^\circ$  to  $40^\circ$   $2\theta$  in continuous scan mode using a step size of  $0.02^\circ$   $2\theta$  and a scan speed of  $2.0^\circ/\text{minute}$ . PXRD derived from the single crystal data, experimental (calculated):  $3.4$  ( $3.6$ );  $6.9$  ( $7.2$ );  $10.4$  ( $10.8$ );  $17.3$  ( $17.5$ );  $19.1$  ( $19.7$ ).

#### Example 28

Flurbiprofen:4,4'-bipyridine (2:1 stoichiometry)

$50\text{ mg}$  ( $0.2046\text{ mmol}$ ) flurbiprofen and  $15\text{ mg}$  ( $0.0960\text{ mmol}$ ) 4,4'-bipyridine were dissolved in  $3\text{ mL}$  acetone. Slow evaporation of the solvent yielded colorless needles of a 2:1 flurbiprofen/4,4'-bipyridine co-crystal, as shown in Figure 48A-D.

Crystal data: (Bruker SMART-APEX CCD Diffractometer),  $\text{C}_{40}\text{H}_{34}\text{F}_2\text{N}_2\text{O}_4$ ,  $M = 644.69$ , monoclinic  $P2_1/n$ ;  $a = 5.860(4)$ ,  $b = 47.49(3)$ ,  $c = 5.928(4)\text{ \AA}$ ,  $\beta = 107.382(8)^\circ$ ,  $U = 1574.3(19)\text{ \AA}^3$ ,  $T = 200(2)\text{ K}$ ,  $Z = 2$ ,  $\mu(\text{Mo-K}\alpha) = 0.096\text{ mm}^{-1}$ ,  $D_c = 1.360\text{ Mg/m}^3$ ,  $\lambda = 0.71073\text{ \AA}$ ,  $F(000) = 676$ ,  $2\theta_{\text{max}} = 21.69^\circ$ ; 4246 reflections measured, 1634 unique ( $R_{\text{int}} = 0.0677$ ). Final residuals for 226 parameters were  $R_1 = 0.0908$ ,  $wR_2 = 0.2065$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.1084$ ,  $wR_2 = 0.2209$  for all 1634 data.

Crystal packing: The co-crystal contains flurbiprofen/bipyridine heterodimers, sustained by two hydrogen bonded carboxylic acidpyridine supramolecular synthon, arranged in a herringbone motif that packs in the space group  $P2_1/n$ . The heterodimer is an extended version of the homodimer and packs to form a two-dimensional network sustained by  $\pi\text{-}\pi$  stacking and hydrophobic interactions of the bipyridine and phenyl groups of the flurbiprofen.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR), aromatic C-H stretching at  $3057\text{ cm}^{-1}$  and  $2981\text{ cm}^{-1}$ ; N-H bending and scissoring at  $1886\text{ cm}^{-1}$ ; C=O stretching at  $1690\text{ cm}^{-1}$ ; C=C and C=N ring stretching at  $1418\text{ cm}^{-1}$ .

Differential Scanning Calorimetry: (TA Instruments 2920 DSC),  $162.47$  degrees C (endotherm); m.p. =  $155\text{--}160$  degrees C (MEL-TEMP); (flurbiprofen m.p. =  $110\text{--}111$  degrees C, 4,4'-bipyridine m.p. =  $111\text{--}114$  degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA),  $30.93\%$  weight loss starting at  $31.13$  degrees C and a  $46.26\%$  weight loss starting at  $168.74$  degrees C followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using Cu K $\alpha$  ( $\lambda = 1.540562$ ),  $30\text{kV}$ ,  $15\text{mA}$ ), the powder data were collected over an angular range of  $3^\circ$  to  $40^\circ 2\theta$  in continuous scan mode using a step size of  $0.02^\circ 2\theta$  and a scan speed of  $2.0^\circ/\text{minute}$ . PXRD derived from the single crystal data: experimental (calculated):  $16.8$  ( $16.8$ );  $17.1$  ( $17.5$ );  $18.1$  ( $18.4$ );  $19.0$  ( $19.0$ );  $20.0$  ( $20.4$ );  $21.3$  ( $21.7$ );  $22.7$  ( $23.0$ );  $25.0$  ( $25.6$ );  $26.0$  ( $26.1$ );  $26.0$  ( $26.6$ );  $26.1$  ( $27.5$ );  $28.2$  ( $28.7$ );  $29.1$  ( $29.7$ ).

#### Example 29

Flurbiprofen:trans-1,2-bis (4-pyridyl) ethylene (2:1 stoichiometry)

$25\text{ mg}$  ( $0.1023\text{ mmol}$ ) flurbiprofen and  $10\text{ mg}$  ( $0.0548\text{ mmol}$ ) trans-1, 2-bis (4-pyridyl) ethylene were dissolved in  $3\text{ mL}$  acetone. Slow evaporation of the solvent yielded colorless needles of a 2:1 flurbiprofen/1,2-bis (4-pyridyl) ethylene co-crystal, as shown in Figure 49A-B.

Crystal data: (Bruker SMART-APEX CCD Diffractometer),  $\text{C}_{42}\text{H}_{36}\text{F}_2\text{N}_2\text{O}_4$ ,  $M = 670.73$ , monoclinic  $P2_1/n$ ;  $a = 5.8697(9)$ ,  $b = 47.357(7)$ ,  $c = 6.3587(10)\text{ \AA}$ ,  $\beta = 109.492(3)^\circ$ ,  $U = 1666.2(4)\text{ \AA}^3$ ,  $T = 200(2)\text{ K}$ ,  $Z = 2$ ,  $\mu(\text{Mo-K}\alpha) = 0.093\text{ mm}^{-1}$ ,  $D_c = 1.337\text{ Mg/m}^3$ ,  $\lambda = 0.71073\text{ \AA}$ ,  $F(000) = 704$ ,  $2\theta_{\text{max}} = 21.69^\circ$ ,  $6977$  reflections measured,  $2383$  unique ( $R_{\text{int}} = 0.0383$ ). Final residuals for  $238$  parameters were  $R_1 = 0.0686$ ,  $wR_2 = 0.1395$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.1403$ ,  $wR_2 = 0.1709$  for all  $2383$  data.

Crystal packing: The co-crystal contains flurbiprofen/1,2-bis (4-pyridyl) ethylene heterodimers, sustained by two hydrogen bonded carboxylic acid-pyridine supramolecular synthons, arranged in a herringbone motif that packs in the space group  $P2_1/n$ . The heterodimer from 1,2-bis (4-pyridyl) ethylene further extends the homodimer relative to example 28 and packs to form a two-dimensional network



sustained by  $\pi$ - $\pi$  stacking and hydrophobic interactions of the bipyridine and phenyl groups of the flurbiprofen.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR), aromatic C-H stretching at  $2927\text{ cm}^{-1}$  and  $2850\text{ cm}^{-1}$ ; N-H bending and scissoring at  $1875\text{ cm}^{-1}$ ; C=O stretching at  $1707\text{ cm}^{-1}$ ; C=C and C=N ring stretching at  $1483\text{ cm}^{-1}$ .

Differential Scanning Calorimetry: (TA Instruments 2920 DSC), 100.01 degrees C, 125.59 degrees C and 163.54 degrees C (endotherms); m.p. = 153-158 degrees C (MEL-TEMP); (flurbiprofen m.p. = 110-111 degrees C, trans-1, 2-bis (4-pyridyl) ethylene m.p. = 150-153 degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA), 91.79% weight loss starting at 133.18 degrees C followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using Cu K $\alpha$  ( $\lambda = 1.540562$ ), 30kV, 15mA), the powder data were collected over an angular range of  $3^\circ$  to  $40^\circ 2\theta$  in continuous scan mode using a step size of  $0.02^\circ 2\theta$  and a scan speed of  $2.0^\circ/\text{minute}$ . PXRD derived from the single crystal data, experimental (calculated): 3.6 (3.7); 17.3 (17.7); 18.1 (18.6); 18.4 (18.6); 19.1 (19.3); 22.3 (22.5); 23.8 (23.9); 25.9 (26.4); 28.1 (28.5).

### Example 30

Carbamazepine:*p*-Phthalaldehyde (1:1 stoichiometry)

25 mg (0.1058 mmol) carbamazepine and 7 mg (0.0521 mmol) *p*-phthalaldehyde were dissolved in approximately 3 mL methanol. Slow evaporation of the solvent yielded colorless needles of a 1:1 carbamazepine/*p*-phthalaldehyde co-crystal, as shown in Figure 50A-B.

Crystal data: (Bruker SMART-APEX CCD Diffractometer),  $\text{C}_{38}\text{H}_{30}\text{N}_4\text{O}_4$ ,  $M = 606.66$ , monoclinic  $C2/c$ ;  $a = 29.191(16)$ ,  $b = 4.962(3)$ ,  $c = 20.316(11)\text{ \AA}$ ,  $\beta = 92.105(8)^\circ$ ,  $U = 2941(3)\text{ \AA}^3$ ,  $T = 200(2)\text{ K}$ ,  $Z = 4$ ,  $\mu(\text{Mo-K}\alpha) = 0.090\text{ mm}^{-1}$ ,  $D_c = 1.370\text{ Mg/m}^3$ ,  $\lambda = 0.71073\text{ \AA}$ ,  $F(000) = 1272$ ,  $2\theta_{\text{max}} = 43.66^\circ$ , 3831 reflections measured, 1559 unique ( $R_{\text{int}} = 0.0510$ ). Final residuals for 268 parameters were  $R_1 = 0.0332$ ,  $wR_2 = 0.0801$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.0403$ ,  $wR_2 = 0.0831$  for all 1559 data.

Crystal packing: The co-crystals contain hydrogen bonded carboxamide homodimers that crystallize in the space group  $C2/c$ . The 1° amines of the

homodimer are bifurcated to the carbonyl of the *p*-phthalaldehyde forming a chain with an adjacent homodimer. The chains pack in a crinkled tape motif sustained by  $\pi$ - $\pi$  interactions between phenyl rings of the CBZ.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR). The 1° amine unsymmetrical and symmetrical stretching was shifted down to 3418  $\text{cm}^{-1}$ ; aliphatic aldehyde and 1° amide C=O stretching was shifted up to 1690  $\text{cm}^{-1}$ ; N-H in-plane bending at 1669  $\text{cm}^{-1}$ ; C-H aldehyde stretching at 2861  $\text{cm}^{-1}$  and H-C=O bending at 1391  $\text{cm}^{-1}$ .

Differential Scanning Calorimetry: (TA Instruments 2920 DSC), 128.46 degrees C (endotherm), m.p. = 121-124 degrees C (MEL-TEMP), (carbamazepine m.p. = 190.2 degrees C, *p*-phthalaldehyde m.p. = 116 degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA), 17.66% weight loss starting at 30.33 degrees C then a 17.57% weight loss starting at 100.14 degrees C followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using Cu K $\alpha$  ( $\lambda = 1.540562$ ), 30kV, 15mA). The powder data were collected over an angular range of 3° to 40° 2 $\theta$  in continuous scan mode using a step size of 0.02° 2 $\theta$  and a scan speed of 2.0°/minute. PXRD derived from the single crystal data, experimental (calculated): 8.5 (8.7); 10.6 (10.8); 11.9 (12.1); 14.4 (14.7) 15.1 (15.2); 18.0 (18.1); 18.5 (18.2); 19.8 (18.7); 23.7 (24.0); 24.2 (24.2); 26.4 (26.7); 27.6 (27.9); 27.8 (28.2); 28.7 (29.1); 29.3 (29.6); 29.4 (29.8).

### Example 31

Carbamazepine:nicotinamide (Form II) (1:1 stoichiometry)

25 mg (0.1058 mmol) carbamazepine and 12 mg (0.0982 mmol) nicotinamide were dissolved in 4 mL of DMSO, methanol or ethanol. Slow evaporation of the solvent yielded colorless needles of a 1:1 carbamazepine/nicotinamide co-crystal, as shown in Figure 51.

Using a separate method, 25 mg (0.1058 mmol) carbamazepine and 12 mg (0.0982mmol) nicotinamide were ground together with mortar and pestle. The solid was determined to be 1:1 carbamazepine/nicotinamide microcrystals (PXRD).

Crystal data: (Bruker SMART-APEX CCD Diffractometer),  $\text{C}_{21}\text{H}_{18}\text{N}_4\text{O}_2$ ,  $M = 358.39$ , monoclinic  $P2_1/n$ ;  $a = 5.0961(8)$ ,  $b = 17.595(3)$ ,  $c = 19.647(3)$  Å,  $\beta = 90.917(3)^\circ$ ,  $U = 1761.5(5)$  Å<sup>3</sup>,  $T = 200(2)$  K,  $Z = 4$ ,  $\mu(\text{Mo-K}\alpha) = 0.090$  mm<sup>-1</sup>,

$D_c = 1.351 \text{ Mg/m}^3$ ,  $\lambda = 0.71073 \text{ \AA}$ ,  $F(000) = 752$ ,  $2\theta_{\text{max}} = 56.60^\circ$ , 10919 reflections measured, 4041 unique ( $R_{\text{int}} = 0.0514$ ). Final residuals for 248 parameters were  $R_1 = 0.0732$ ,  $wR_2 = 0.1268$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.1161$ ,  $wR_2 = 0.1430$  for all 4041 data.

**Crystal packing:** The co-crystals contain hydrogen bonded carboxamide homodimers. The 1° amines are bifurcated to the carbonyl of the nicotinamide on each side of the dimer. The 1° amines of each nicotinamide are hydrogen bonded to the carbonyl of the adjoining dimer. The dimers form chains with  $\pi$ - $\pi$  interactions from the phenyl groups of the CBZ.

**Infrared Spectroscopy:** (Nicolet Avatar 320 FTIR), unsymmetrical and symmetrical stretching shifts down to  $3443 \text{ cm}^{-1}$  and  $3388 \text{ cm}^{-1}$  accounting for 1° amines; 1° amide C=O stretching at  $1690 \text{ cm}^{-1}$ ; N-H in-plane bending at  $1614 \text{ cm}^{-1}$ ; C=C stretching shifted down to  $1579 \text{ cm}^{-1}$ ; aromatic H's from  $800 \text{ cm}^{-1}$  to  $500 \text{ cm}^{-1}$  are present.

**Differential Scanning Calorimetry:** (TA Instruments 2920 DSC), 74.49 degrees C (endotherm) and 159.05 degrees C (endotherm), m.p. = 153-158 degrees C (MEL-TEMP), (carbamazepine m.p. = 190.2 degrees C, nicotinamide m.p. = 150-160 degrees C).

**Thermogravimetric Analysis:** (TA Instruments 2950 Hi-Resolution TGA), 57.94% weight loss starting at 205.43 degrees C followed by complete decomposition.

**Powder x-ray diffraction:** (Rigaku Miniflex Diffractometer using Cu K $\alpha$  ( $\lambda = 1.540562$ ), 30kV, 15mA). The powder data were collected over an angular range of  $3^\circ$  to  $40^\circ 2\theta$  in continuous scan mode using a step size of  $0.02^\circ 2\theta$  and a scan speed of  $2.0^\circ/\text{minute}$ . PXRD: Showed analogous peaks to the simulated PXRD derived from the single crystal data. PXRD analysis experimental (calculated): 6.5 (6.7); 8.8 (9.0); 10.1 (10.3); 13.2 (13.5); 15.6 (15.8); 17.7 (17.9); 17.8 (18.1); 18.3 (18.6); 19.8 (20.1); 20.4 (20.7); 21.6 (22.); 22.6 (22.8); 22.9 (23.2); 26.4 (26.7); 26.7 (27.0); 28.0 (28.4).

### Example 32

Carbamazepine:saccharin (Form II) (1:1 stoichiometry)

25 mg (0.1058mmol) carbamazepine and 19 mg (0.1037 mmol) saccharin were dissolved in approximately 4 mL ethanol. Slow evaporation of the solvent

yielded colorless needles of a 1:1 carbamazepine/saccharin cocrystal, as shown in Figure 52. Solubility measurements indicate that this multiple-component crystal of carbamazepine has improved solubility over previously known forms of carbamazepine (*e.g.*, increased molar solubility and longer solubility in aqueous solutions).

Crystal data: (Bruker SMART-APEX CCD Diffractometer),  $C_{22}H_{17}N_3O_4S_1$ ,  $M = 419.45$ , triclinic  $P-1$ ;  $a = 7.5140(11)$ ,  $b = 10.4538(15)$ ,  $c = 12.6826(18)$  Å,  $\alpha = 83.642(2)^\circ$ ,  $\beta = 85.697(2)^\circ$ ,  $\gamma = 75.411(2)^\circ$ ,  $U = 957.0(2)$  Å<sup>3</sup>,  $T = 200(2)$  K,  $Z = 2$ ,  $\mu(\text{Mo-K}\alpha) = 0.206$  mm<sup>-1</sup>,  $D_c = 1.456$  Mg/m<sup>3</sup>,  $\lambda = 0.71073$  Å,  $F(000) = 436$ ,  $2\theta_{\text{max}} = 56.20^\circ$ ; 8426 reflections measured, 4372 unique ( $R_{\text{int}} = 0.0305$ ). Final residuals for 283 parameters were  $R_1 = 0.0458$ ,  $wR_2 = 0.1142$  for  $I > 2\sigma(I)$ , and  $R_1 = 0.0562$ ,  $wR_2 = 0.1204$  for all 4372 data.

Crystal packing: The co-crystals contain hydrogen bonded carboxamide homodimers. The 2° amines of the saccharin are hydrogen bonded to the carbonyl of the CBZ on each side forming a tetramer. The crystal has a space group of  $P-1$  with  $\pi$ - $\pi$  interactions between the phenyl groups of the CBZ and the saccharin phenyl groups.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR), unsymmetrical and symmetrical stretching shifts up to 3495 cm<sup>-1</sup> accounting for 1° amines; C=O aliphatic stretching was shifted up to 1726 cm<sup>-1</sup>; N-H in-plane bending at 1649 cm<sup>-1</sup>; C=C stretching shifted down to 1561 cm<sup>-1</sup>; (O=S=O) sulfonyl peak at 1330 cm<sup>-1</sup> C-N aliphatic stretching 1175 cm<sup>-1</sup>.

Differential Scanning Calorimetry: (TA Instruments 2920 DSC), 75.31 degrees C (endotherm) and 177.32 degrees C (endotherm), m.p. = 148-155 degrees C (MEL-TEMP); (carbamazepine m.p. = 190.2 degrees C, saccharin m.p. = 228.8 degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA), 3.342% weight loss starting at 67.03 degrees C and a 55.09% weight loss starting at 118.71 degrees C followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using Cu K $\alpha$  ( $\lambda = 1.540562$ ), 30kV, 15mA). The powder data were collected over an angular range of 3° to 40° 2 $\theta$  in continuous scan mode using a step size of 0.02° 2 $\theta$  and a scan speed of 2.0°/minute. PXRD derived from the single crystal data, experimental (calculated):

6.9 (7.0); 12.2 (12.2); 13.6 (13.8); 14.0 (14.1); 14.1 (14.4); 15.3 (15.6); 15.9 (15.9);  
18.1 (18.2); 18.7 (18.8); 20.2 (20.3); 21.3 (21.5); 23.7 (23.9); 26.3 (26.4); 28.3 (28.3).

### Example 33

Carbamazepine:2,6-pyridinedicarboxylic acid (2:3 stoichiometry)

36 mg (0.1524 mmol) carbamazepine and 26 mg (0.1556 mmol) 2,6-pyridinedicarboxylic acid were dissolved in approximately 2 mL ethanol. Slow evaporation of the solvent yielded clear needles of a 1:1 carbamazepine/2,6-pyridinedicarboxylic acid co-crystal, as shown in Figure 54A-B.

Crystal data: (Bruker SMART-APEX CCD Diffractometer).  $C_{22}H_{17}N_3O_5$ ,  $M=403.39$ , orthorhombic  $P2(1)2(1)2(1)$ ;  $a=7.2122$ ,  $b=14.6491$ ,  $c=17.5864$  Å,  $\alpha=90^\circ$ ,  $\beta=90^\circ$ ,  $\gamma=90^\circ$ ,  $V=1858.0(2)$  Å<sup>3</sup>,  $T=100$  K,  $Z=4$ ,  $\mu(MO-K\alpha)=0.104$  mm<sup>-1</sup>,  $D_c=1.442$  Mg/m<sup>3</sup>,  $\lambda=0.71073$  Å,  $F(000)840$ ,  $2\theta_{max}=28.3$ . 16641 reflections measured, 4466 unique ( $R_{int}=0.093$ ). Final residuals for 271 parameters were  $R_1=0.0425$  and  $wR_2=0.0944$  for  $I>2\sigma(I)$ .

Crystal packing: Each hydrogen on the CBZ 1° amine is hydrogen bonded to a carbonyl group of a different 2,6-pyridinedicarboxylic acid moiety. The carbonyl of the CBZ carboxamide is hydrogen bonded to two hydroxide groups of one 2,6-pyridinedicarboxylic acid moiety.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR). 3439 cm<sup>-1</sup>, (N-H stretch, 1° amine, CBZ); 1734 cm<sup>-1</sup>, (C=O); 1649 cm<sup>-1</sup>, (C=C).

Melting Point: 214-216 degrees C (MEL-TEMP). (carbamazepine m.p. = 191-192 degrees C, 2,6-pyridinedicarboxylic acid m.p. = 248-250 degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA). 69% weight loss starting at 215 degrees C and a 17% weight loss starting at 392 degrees C followed by complete decomposition.

### Example 34

Carbamazepine:5-nitroisophthalic acid (1:1 stoichiometry)

40 mg (0.1693 mmol) carbamazepine and 30 mg (0.1421 mmol) 5-nitroisophthalic acid were dissolved in approximately 3 mL methanol or ethanol. Slow evaporation of the solvent yielded yellow needles of a 1:1 carbamazepine/5-nitroisophthalic acid co-crystal, as shown in Figure 55A-B.



Crystal data: (Bruker SMART-APEX CCD Diffractometer).  $C_{47}H_{40}N_6O_{16}$ ,  $M=944.85$ , monoclinic  $C2/c$ ;  $a=34.355(8)$ ,  $b=5.3795(13)$ ,  $c=23.654(6)$  Å,  $\alpha=90^\circ$ ,  $\beta=93.952(6)^\circ$ ,  $\gamma=90^\circ$ ,  $V=4361.2(18)$  Å<sup>3</sup>,  $T=200(2)$  K,  $Z=4$ ,  $\mu(MO-K\alpha)=0.110$  mm<sup>-1</sup>,  $D_c=1.439$  Mg/m<sup>3</sup>,  $\lambda=0.71073$  Å,  $F(000)1968$ ,  $2\theta_{max}=26.43^\circ$ . 11581 reflections measured, 4459 unique ( $R_{int}=0.0611$ ). Final residuals for 311 parameters were  $R_1=0.0725$ ,  $wR_2=0.1801$  for  $I>2\sigma(I)$ , and  $R_1=0.1441$ ,  $wR_2=0.1204$  for all 4459 data.

Crystal packing: The co-crystals are sustained by hydrogen bonded carboxylic acid homodimers between the two 5-nitroisophthalic acid moieties and hydrogen bonded carboxy-amide heterodimers between the carbamazepine and 5-nitroisophthalic acid moiety. There is solvent hydrogen bonded to an additional N-H donor from the carbamazepine moiety.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR).  $3470$  cm<sup>-1</sup>, (N-H stretch, 1° amine, CBZ);  $3178$  cm<sup>-1</sup>, (C-H stretch, alkene);  $1688$  cm<sup>-1</sup>, (C=O);  $1602$  cm<sup>-1</sup>, (C=C).

Differential Scanning Calorimetry: (TA Instruments 2920 DSC).  $190.51$  degrees C (endotherm). m.p. = NA (decomposes at  $197-200$  degrees C) (MEL-TEMP). (carbamazepine m.p. =  $191-192$  degrees C, 5-nitroisophthalic acid m.p. =  $260-261$  degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA).  $32.02\%$  weight loss starting at  $202$  degrees C, a  $12.12\%$  weight loss starting at  $224$  degrees C and a  $17.94\%$  weight loss starting at  $285$  degrees C followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using  $CuK\alpha$  ( $\lambda=1.540562$ ),  $30kV$ ,  $15mA$ ). The powder data were collected over an angular range of  $3$  to  $40$   $2\theta$  in continuous scan mode using a step size of  $0.02$   $2\theta$  and a scan speed of  $2.0$  /min. PXRD: Showed analogous peaks to the simulated PXRD derived from the single crystal data. PXRD analysis experimental (calculated):  $10.138$  ( $10.283$ ),  $15.291$  ( $15.607$ ),  $17.438$  ( $17.791$ ),  $21.166$  ( $21.685$ ),  $31.407$  ( $31.738$ ),  $32.650$  ( $32.729$ ).

### Example 35

Carbamazepine:1,3,5,7-adamantane tetracarboxylic acid (1:1 stoichiometry)

$15$  mg ( $0.1524$  mmol) carbamazepine and  $20$  mg ( $0.1556$  mmol) 1,3,5,7-adamantanetetracarboxylic acid were dissolved in approximately  $1$  mL methanol or  $1$

mL ethanol. Slow evaporation of the solvent yields clear plates of a 2:1 carbamazepine/1,3,5,7-adamantanetetracarboxylic acid co-crystal, as shown in Figure 56A-B.

Crystal data: (Bruker SMART-APEX CCD Diffractometer).  $C_{44}H_{40}N_2O_{10}$ ,  $M=784.80$ , monoclinic  $C2/c$ ;  $a=18.388(4)$ ,  $b=12.682(3)$ ,  $c=16.429(3)$  Å,  $\beta=100.491(6)^\circ$ ,  $V=3767.1(14)$  Å<sup>3</sup>,  $T=100(2)$  K,  $Z=4$ ,  $\mu(\text{MO-K}\alpha)=0.099$  mm<sup>-1</sup>,  $D_c=1.384$  Mg/m<sup>3</sup>,  $\lambda=0.71073$  Å,  $F(000)1648$ ,  $2\theta_{\text{max}}=28.20^\circ$ . 16499 reflections measured, 4481 unique ( $R_{\text{int}}=0.052$ ). Final residuals for 263 parameters were  $R_1=0.0433$  and  $wR_2=0.0913$  for  $I>2\sigma(I)$ .

Crystal packing: The co-crystals form a single 3D network of four tetrahedron, linked by square planes similar to the *PtS* topology. The crystals are sustained by hydrogen bonding.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR).  $3431$  cm<sup>-1</sup>, (N-H stretch, 1° amine, CBZ);  $3123$  cm<sup>-1</sup>, (C-H stretch, alkene);  $1723$  cm<sup>-1</sup>, (C=O);  $1649$  cm<sup>-1</sup>, (C=C).

Melting Point: (MEL-TEMP). 258-260 degrees C (carbamazepine m.p. = 191-192 degrees C, adamantanetetracarboxylic acid m.p. = >390 degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA). 9% weight loss starting at 189 degrees C, a 52% weight loss starting at 251 degrees C and a 31% weight loss starting at 374 degrees C followed by complete decomposition.

### Example 36

Carbamazepine:benzoquinone (1:1 stoichiometry)

25 mg (0.1058 mmol) carbamazepine and 11 mg (0.1018 mmol) benzoquinone was dissolved in 2 mL methanol or THF. Slow evaporation of the solvent produced an average yield of yellow crystals of a 1:1 carbamazepine/benzoquinone co-crystal, as shown in Figure 57A-B.

Crystal data: (Bruker SMART-APEX CCD Diffractometer).  $C_{21}H_{16}N_2O_3$ ,  $M=344.36$ , monoclinic  $P2(1)/c$ ;  $a=10.3335(18)$ ,  $b=27.611(5)$ ,  $c=4.9960(9)$  Å,  $\beta=102.275(3)^\circ$ ,  $V=1392.9(4)$  Å<sup>3</sup>,  $T=100(2)$  K,  $Z=3$ ,  $D_c=1.232$  Mg/m<sup>3</sup>,  $\mu(\text{MO-K}\alpha)=0.084$  mm<sup>-1</sup>,  $\lambda=0.71073$  Å,  $F(000)540$ ,  $2\theta_{\text{max}}=28.24^\circ$ . 8392 reflections measured,

3223 unique ( $R_{\text{int}}=0.1136$ ). Final residuals for 199 parameters were  $R_1=0.0545$  and  $wR_2=0.1358$  for  $I>2\sigma(I)$ , and  $R_1=0.0659$  and  $wR_2=0.1427$  for all 3223 data.

Crystal packing: The co-crystals contain hydrogen bonded carboxamide homodimers. Each 1° amine on the CBZ is bifurcated to a carbonyl group of a benzoquinone moiety. The dimers form infinite chains.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR).  $3420\text{ cm}^{-1}$ , (N-H stretch, 1° amine, CBZ);  $2750\text{ cm}^{-1}$ , (aldehyde stretch);  $1672\text{ cm}^{-1}$ , (C=O);  $1637\text{ cm}^{-1}$ , (C=C, CBZ).

Melting Point: 170 degrees C (MEL-TEMP). (carbamazepine m.p. = 191-192 degrees C, benzoquinone m.p. = 115.7 degrees C).

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA). 20.62% weight loss starting at 168 degrees C and a 78% weight loss starting at 223 degrees C followed by complete decomposition.

#### Example 37

##### Carbamazepine:trimesic acid (Form II) (1:1 stoichiometry)

36 mg (0.1524 mmol) carbamazepine and 31 mg (0.1475 mmol) trimesic acid were dissolved in a solvent mixture of approximately 2 mL methanol and 2 mL dichloromethane. Slow evaporation of the solvent mixture yielded white starbursts of a 1:1 carbamazepine/trimesic acid co-crystal, as shown in Figure 58A-B.

Crystal data: (Bruker SMART-APEX CCD Diffractometer).  $\text{C}_{24}\text{H}_{18}\text{N}_2\text{O}_7$ ,  $M=446.26$ , monoclinic  $C2/c$ ;  $a=32.5312(50)$ ,  $b=5.2697(8)$ ,  $c=24.1594(37)\text{ \AA}$ ,  $\alpha=90^\circ$ ,  $\beta=98.191(3)^\circ$ ,  $\gamma=90^\circ$ ,  $V=4099.39(37)\text{ \AA}^3$ ,  $T=-173\text{ K}$ ,  $Z=8$ ,  $\mu(\text{MO-K}\alpha)=0.110\text{ mm}^{-1}$ ,  $D_c=1.439\text{ Mg/m}^3$ ,  $\lambda=0.71073\text{ \AA}$ ,  $F(000)1968$ ,  $2\theta_{\text{max}}=26.43^\circ$ . 11581 reflections measured, 4459 unique ( $R_{\text{int}}=0.0611$ ). Final residuals for 2777 parameters were  $R_1=0.1563$ ,  $wR_2=0.1887$  for  $I>2\sigma(I)$ , and  $R_1=0.1441$ ,  $wR_2=0.1204$  for all 3601 data.

Crystal packing: The co-crystals are sustained by hydrogen bonded carboxylic acid homodimers between carbamazepine and trimesic acid moieties and hydrogen bonded carboxylic acid-amine heterodimers between two trimesic acid moieties arranged in a stacked ladder formation.

Infrared Spectroscopy: (Nicolet Avatar 320 FTIR).  $3486\text{ cm}^{-1}$  (N-H stretch, 1° amine, CBZ);  $1688\text{ cm}^{-1}$  (C=O, 1° amide stretch, CBZ);  $1602\text{ cm}^{-1}$  (C=C, CBZ).

Differential Scanning Calorimetry: (TA Instruments 2920 DSC). 273 degrees C (endotherm). m.p. = NA, decomposes at 278 degrees C (MEL-TEMP). (carbamazepine m.p. = 191-192 degrees C, trimesic acid m.p. = 380 degrees C)

Thermogravimetric Analysis: (TA Instruments 2950 Hi-Resolution TGA). 62.83% weight loss starting at 253 degrees C and a 30.20% weight loss starting at 278 degrees C followed by complete decomposition.

Powder x-ray diffraction: (Rigaku Miniflex Diffractometer using CuK $\alpha$  ( $\lambda=1.540562$ ), 30kV, 15mA). The powder data were collected over an angular range of 3 to 40 2 in continuous scan mode using a step size of 0.02 2 and a scan speed of 2.0 /min. PXRD analysis experimental: 10.736, 12.087, 16.857, 24.857, 27.857.

**Table V. Detailed Characterization of Co-Crystals**

All PXRD peaks are in units of degrees 2-theta  
All Raman shifts are in units of cm<sup>-1</sup>

Carbamazepine: Saccharin

PXRD (Form I): 7.01, 12.07, 14.09, 15.41, 18.47, 20.13, 22.01, 23.57, 24.41, 28.31 (Fig. 1)

PXRD (Form II): 6.9, 12.2, 13.6, 14.0, 14.1, 15.3, 15.9, 18.1, 18.7, 20.2, 21.3, 23.7, 26.3, 28.3

DSC (Form I): Broad endotherm at 161.9 degrees C (Fig. 2)

TGA (Form I): Decomposition above 200 degrees CDSC (Form II): Endothermic transitions at 75.31 and 177.32 degrees C

TGA (Form II): 3.342 percent weight loss starting at 67.03 degrees C, 55.09 percent weight loss starting at 118.71 degrees C, followed by decomposition

Method: CMAX

Carbamazepine: Nicotinamide

PXRD (Form I): 4.97, 6.67, 8.75, 10.25, 13.25, 17.91, 18.49, 19.95, 20.49, 22.73, 24.39, 26.49 (Fig. 3)

PXRD (Form II): 6.5, 8.8, 10.1, 13.2, 15.6, 17.7, 17.8, 18.3, 19.8, 20.4, 21.6, 22.6, 22.9, 26.4, 26.7, 28.0

DSC (Form I): Sharp endotherm at 156.9 degrees C (Fig. 4)

TGA (Form I): Decomposition beginning at ~150 degrees CDSC (Form II): Endothermic transitions at 74.49 and 159.05 degrees C

TGA (Form II): 57.94 percent weight loss starting at 205.43 degrees C, followed by decomposition

Method: CMAX

Carbamazepine: Trimesic acid

PXRD (Form I): 10.89, 12.23, 14.83, 16.25, 17.05, 18.13, 18.47, 21.47, 21.95, 24.57, 25.11, 27.99 (Fig. 5)

PXRD (Form II): 10.74, 12.09, 16.86, 24.86, 27.86

DSC (Form II): Endothermic transition at 273 degrees C

TGA (Form II): 62.83 percent weight loss starting at 253 degrees C, 30.20 percent

weight loss starting at 278 degrees C, followed by decomposition Method: CMAX
<p>Celecoxib: Nicotinamide</p> <p>PXRD: 3.77, 7.56, 9.63, 14.76, 15.21, 16.01, 17.78, 18.68, 19.31, 20.44, 21.19, 22.10</p> <p>DSC: Two endothermic transitions at 117.2 and 118.8 degrees C and a sharp endotherm at 129.7 degrees C</p> <p>TGA: Decomposition beginning at ~150 degrees C</p> <p>Raman: 1617.5, 1598.7, 1452.1, 1370.3, 1162.5, 1044.3, 972.9, 796.4, 631.8, 392.5, 205.9</p> <p>Method: Slow evaporation of a 1:1 solution from acetone</p>
<p>Topiramate: 18-Crown-6</p> <p>PXRD: 10.79, 11.07, 12.17, 13.83, 16.13, 18.03, 18.51, 18.79, 19.21, 21.43, 22.25, 24.11 (Fig. 6)</p> <p>DSC: Sharp endotherm at 134.7 degrees C, followed by an exotherm at 203 degrees C (Fig. 7)</p> <p>TGA: Rapid decomposition beginning at ~ 135 degrees C and leveling off slightly after 200 degrees C</p> <p>Raman: 2994.5, 2942.7, 1471.6, 1427.4, 1261.7, 849.4, 804.5, 745.1, 629.2, 280.4, 225.9</p> <p>Method: Addition of an ether solution containing 1 equivalent of topiramate to an ether solution containing 18-crown-6. Product precipitated following minor agitation of the combined mixture and was collected.</p>
<p>Olanzapine: Nicotinamide</p> <p>PXRD (Form I): 4.89, 8.65, 12.51, 14.19, 15.59, 17.15, 19.71, 21.05, 23.95, 24.59, 25.53, 26.71 (Fig. 8)</p> <p>PXRD (Form II): 6.41, 12.85, 18.67, 21.85, 24.37 (Fig. 30)</p> <p>PXRD (Form III): 6.41, 12.85, 14.91, 18.67, 21.85, 24.37 (Fig. 31)</p> <p>DSC (Form I): Slightly broad endotherm at 126.1 degrees C (Fig. 9)</p> <p>Method: See above</p>
<p>Celecoxib: 18-Crown-6</p> <p>PXRD: 8.73, 11.89, 12.57, 13.13, 15.01, 16.37, 17.03, 17.75, 18.45, 20.75, 22.37, 23.11, 24.33, 24.97, 26.61, 28.15 (Fig. 10)</p> <p>DSC: Sharp endotherm at 189.6 degrees C (Fig. 11)</p> <p>TGA: Decomposition above 200 degrees C with a 25% weight loss between ~190-210 degrees C</p> <p>Method: A solution containing one equivalent of celecoxib in ether was added to a solution containing 18-crown-6. A white solid formed immediately and was collected.</p>
<p>Itraconazole: Succinic Acid</p> <p>PXRD: 3.0, 6.0, 8.1, 9.0, 17.1, 24.5 (Fig. 12)</p> <p>DSC: Single endothermic transition at 160.1 degrees C <math>\pm</math> 1.0 degrees C (Fig. 13)</p> <p>TGA: Less than 0.1 % volatile components by weight</p> <p>Method: See above</p>
<p>Itraconazole: Fumaric Acid</p> <p>PXRD: 4.6, 5.9, 9.2, 10.6, 19.1, 20.8 (Fig. 14)</p> <p>DSC: The material had a weak endothermic transition at 141.7 degrees C and a strong endothermic transition at 179.58 degrees C (Fig. 15)</p> <p>TGA: The sample loses 0.5 % of its weight on the TGA between room temperature and 100 degrees C</p> <p>Method:</p>



<p>Itraconazole: Tartaric Acid  PXR: 4.1, 6.2, 8.3, 20.7, 25.6, 26.3 (Fig. 16)  DSC: An endothermic transition at 180.74 degrees C (Fig. 17)  TGA: Less than 0.1 % volatile components by weight by TGA.  Method: See above</p>
<p>Itraconazole: Malic acid  PXR: 4.4, 5.9, 8.8, 17.7, 20.0, 21.1, 22.6 (Fig. 18)  DSC: The sample has a strong endothermic transition at 154.36 degrees C (Fig. 19)  TGA: The sample contained less than 0.1% volatile components by weight  Method: See above</p>
<p>ItraconazoleHCl: Tartaric acid  PXR: 3.7, 11.0, 13.8, 16.5, 17.8 (Fig. 20)  DSC: The sample has a peak endothermic transition at 161 degrees C (Fig. 21)  TGA: The sample contained less than 0.1 % volatile components by weight  Method: See above</p>
<p>Modafinil: Malonic acid  PXR: 5.00, 9.17, 16.81, 18.26, 19.43, 21.36, 21.94, 22.77, 24.49, 25.63, 28.45 (Fig. 22)  DSC: Endothermic transition at 106.23 degrees C (Fig. 40)  Raman: 1601, 1183, 1032, 1004, 814, 633, 265, 222 (Fig. 42)  Method: See above</p>
<p>Modafinil: Benzamide  PXR: 5.11, 9.35, 10.25, 10.79, 14.07, 16.87, 18.33, 19.53, 21.38, 22.05, 22.89, 23.57, 24.73, 25.19, 25.81, 26.51, 28.60 (Fig. 23)  Method: Slow evaporation from a 1:1 solution in 1,2-dichloroethane</p>
<p>Modafinil: Mandelic acid  PXR: 6.11, 6.75, 9.53, 10.31, 14.77, 15.77, 16.99, 18.03, 20.01, 21.61, 22.47, 23.27, 25.27, 25.75, 27.23 (Fig. 24)  Method: Slow evaporation from a 1:1 solution in acetone</p>
<p>Modafinil: Glycolic acid  PXR: 6.09, 9.51, 14.91, 15.97, 19.01, 20.03, 21.59, 22.43, 22.75, 23.75, 25.03, 25.71 (Fig. 25)  Method: Slow evaporation from a 1:1 solution in acetone</p>
<p>Modafinil: Fumaric acid  PXR: 5.87, 7.19, 8.95, 12.49, 13.99, 16.13, 17.09, 18.19, 19.99, 21.57, 23.48, 25.01, 25.79, 28.17, 28.87, 29.69, 32.19 (Fig. 26)  Method: Slow evaporation from a 1:1 solution in 1,2-dichloroethane</p>
<p>Modafinil: Maleic acid  PXR: 4.69, 6.15, 9.61, 10.23, 15.65, 16.53, 17.19, 18.01, 19.27, 19.53, 19.97, 21.83, 22.45, 25.65 (Fig. 43)  Method: See above</p>
<p>5-fluorouracil: Urea  PXR: 11.23, 12.69, 13.27, 15.93, 16.93, 20.37, 23.65, 25.55, 26.87, 32.49 (Fig. 36)  DSC: Sharp endotherm at 207.6 degrees C (Fig. 33)  TGA: 32 percent weight loss between 150 and 220 degrees C (Fig. 34)  Raman: 1347.1, 1024.4, 756.9, 643.7, 545.3 (Fig. 35)  Method: See above</p>
<p>Hydrochlorothiazide: Nicotinic acid  PXR: 8.57, 13.23, 14.31, 16.27, 17.89, 18.75, 21.13, 21.45, 24.41, 25.73, 26.57, 27.43 (Fig. 37)</p>

Method: See above
Hydrochlorothiazide: 18-crown-6 PXRD: 9.97, 10.43, 11.57, 11.81, 12.83, 14.53, 15.67, 16.61, 19.05, 20.31, 20.65, 21.09, 21.85, 22.45, 23.63, 24.21, 25.33, 26.73 (Fig. 38) Method: See above
Hydrochlorothiazide: piperazine PXRD: 6.85, 13.75, 15.93, 18.71, 20.67, 20.93, 23.27, 24.17, 28.33, 28.87, 30.89 (Fig. 39) Method: See above
Acetaminophen: 4,4'-bipyridine:water DSC: Endothermic transition at 57.77 degrees C Method: See above
Phenytoin: Pyridone PXRD: 5.2, 11.1, 15.1, 16.2, 16.7, 17.8, 19.4, 19.8, 20.3, 21.2, 23.3, 26.1, 26.4, 27.3, 29.5 DSC: Endothermic transitions at 233.39 and 271.33 degrees C TGA: 29.09 percent weight loss starting at 192.8 degrees C, 48.72 percent weight loss starting at 238.27 degrees C, 18.38 percent weight loss starting at 260.17 degrees C, followed by decomposition Method: See above
Aspirin: 4,4'-bipyridine DSC: Endothermic transition at 95.14 degrees C TGA: 9 percent weight loss starting at 22.62 degrees C, 49.06 percent weight loss starting at 102.97 degrees C, decomposition starting at 209.37 degrees C Method: See above
Ibuprofen: 4,4'-bipyridine PXRD: 3.4, 6.9, 10.4, 17.3, 19.1 DSC: Endothermic transitions at 64.85 and 118.79 degrees C TGA: 13.28 percent weight loss between room temperature and 100.02 degrees C followed by decomposition Method: See above
Flurbiprofen: 4,4'-bipyridine PXRD: 16.8, 17.1, 18.1, 19.0, 20.0, 21.3, 22.7, 25.0, 26.0, 26.0, 26.1, 28.2, 29.1 DSC: Endothermic transition at 162.47 degrees C TGA: 30.93 percent weight loss starting at 31.13 degrees C, 46.26 percent weight loss starting at 168.74 degrees C, followed by decomposition Method: See above
Flurbiprofen:trans-1,2-bis (4-pyridyl) ethylene PXRD: 3.6, 17.3, 18.1, 18.4, 19.1, 22.3, 23.8, 25.9, 28.1 DSC: Endothermic transitions at 100.01, 125.59, and 163.54 degrees C TGA: 91.79 percent weight loss starting at 133.18 degrees C followed by decomposition Method: See above
Carbamazepine: p-phthalaldehyde PXRD: 8.5, 10.6, 11.9, 14.4, 15.1, 18.0, 18.5, 19.8, 23.7, 24.2, 26.4, 27.6, 27.8, 28.7, 29.3, 29.4 DSC: Endothermic transition at 128.46 degrees C TGA: 17.66 percent weight loss starting at 30.33 degrees C, 17.57 percent weight loss starting at 100.14 degrees C, followed by decomposition Method: See above

<p>Carbamazepine: 2,6-pyridinecarboxylic acid  TGA: 69 percent weight loss starting at 215 degrees C, 17 percent weight loss starting at 392 degrees C, followed by decomposition  Method: See above</p>
<p>Carbamazepine: 5-nitroisophthalic acid  PXRD: 10.14, 15.29, 17.44, 21.17, 31.41, 32.65  TGA: 32.02 percent weight loss starting at 202 degrees C, 12.12 percent weight loss starting at 224 degrees C, 17.94 percent weight loss starting at 285 degrees C, followed by decomposition  Method: See above</p>
<p>Carbamazepine: 1,3,5,7-adamantane tetracarboxylic acid  TGA: 9 percent weight loss starting at 189 degrees C, 52 percent weight loss starting at 251 degrees C, 31 percent weight loss starting at 374 degrees C, followed by decomposition  Method: See above</p>
<p>Carbamazepine: Benzoquinone  TGA: 20.62 percent weight loss starting at 168 degrees C, 78 percent weight loss starting at 223 degrees C, followed by decomposition  Method: See above</p>

#### Example 38

A co-crystal with a modulated dissolution profile has been prepared. Celecoxib: nicotinamide co-crystals were prepared via methods shown in example 4. (See Fig. 27)

#### Example 39

A co-crystal with a modulated dissolution profile has been prepared. Itraconazole: succinic acid, itraconazole:tartaric acid and itraconazole:malic acid co-crystals were prepared via methods shown in examples 8, 10 and 11. (See Fig. 28)

#### Example 40

A co-crystal of an unsaltable or difficult to salt API has been prepared. Celecoxib: nicotinamide co-crystals were prepared via methods shown in example 4.

#### Example 41

A co-crystal with an improved hygroscopicity profile has been prepared. Celecoxib: nicotinamide co-crystals were prepared via methods shown in example 4. (See Fig. 29)

Example 42

A co-crystal with reduced form diversity as compared to the API has been prepared.

Co-crystals of carbamazepine and saccharin have been prepared via method shown in example 1.

TABLE I

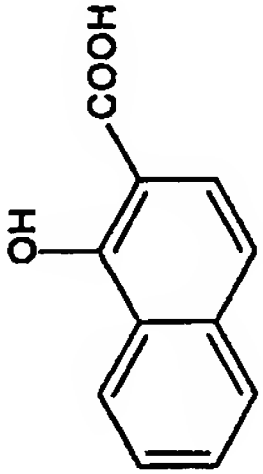
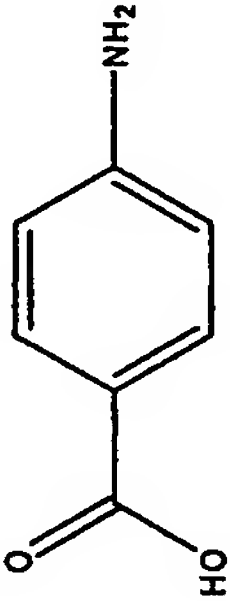
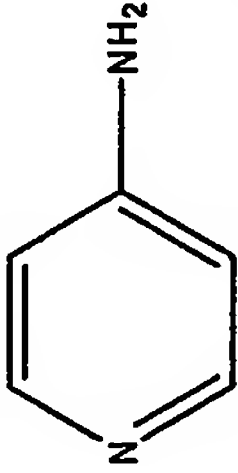
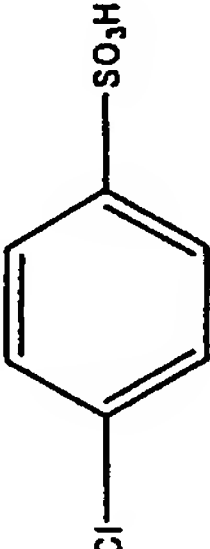
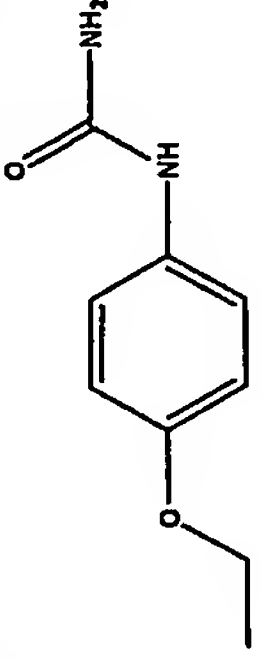
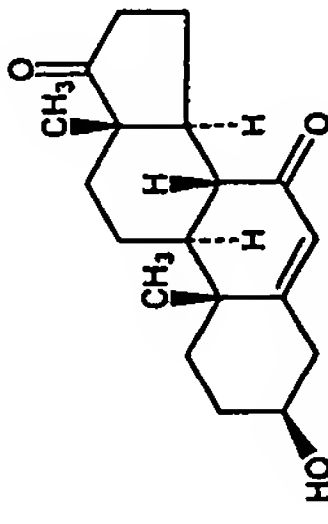
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
1-Hydroxy-2-naphthoic acid	188.18	191-192	2	Carboxylic acid, alcohol	1	2		2.7, 13.5
4-aminobenzoic acid	137.14	187-188	2	Amine, carboxylic acid	1	3		4.7, 4.8
4-aminopyridine	94.11	158-159	3	Amine, pyridine	1	2		10
4-Chlorobenzene- sulfonic acid	192.63	67	1	SO <sub>3</sub> H	3	1		0-1
4-ethoxyphenyl urea	180.2	173-174	3	Amide, NH	2	3		~7-9
7-oxo-DHEA	303	190-192	1	Alcohol, Ketone	3	1		



TABLE I

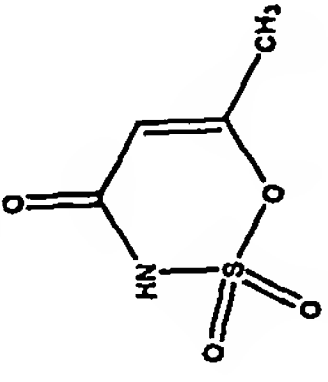
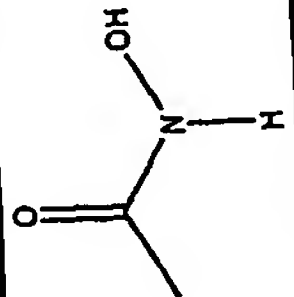
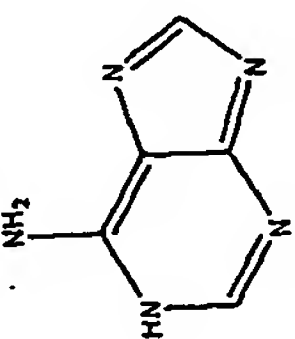
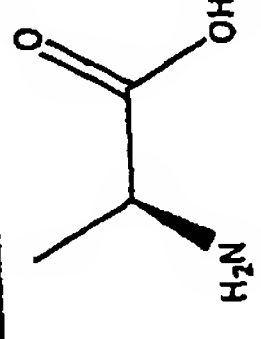
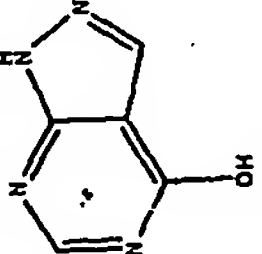
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Acesulfame	163.15	123-124	3	SO <sub>2</sub> , Amide	4	1		~5-7
Acetohydroxamic acid	75.07	89-92	3	Amide, NH, OH	2	2		8.7
Adenine	135.13	220 (sub.)	1	Amine, NH	3	3		3.8
Adipic Acid	146.14	152	1	Carboxylic acid	2	2	HOOC(CH <sub>2</sub> ) <sub>4</sub> COOH	4.44, 5.44
Alanine	89.09	289-291	1	Amine, carboxillic acid	1	3		2.35, 9.87
Allopurinaol	136.11	> 350	3	OH, NH	4	2		10.2

TABLE I

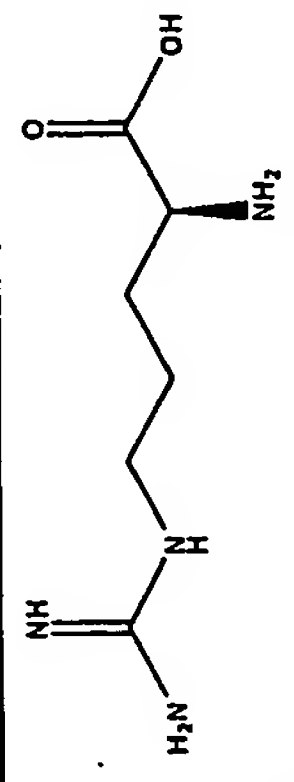
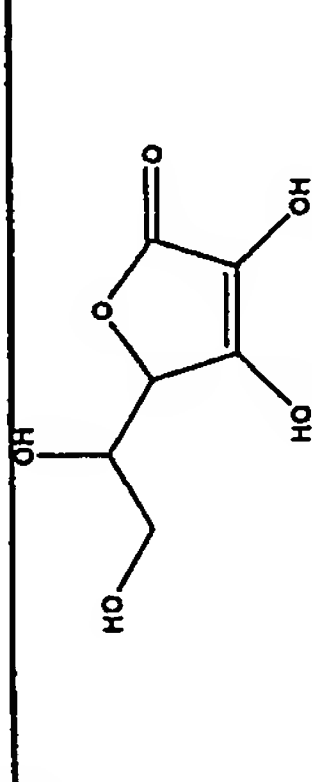
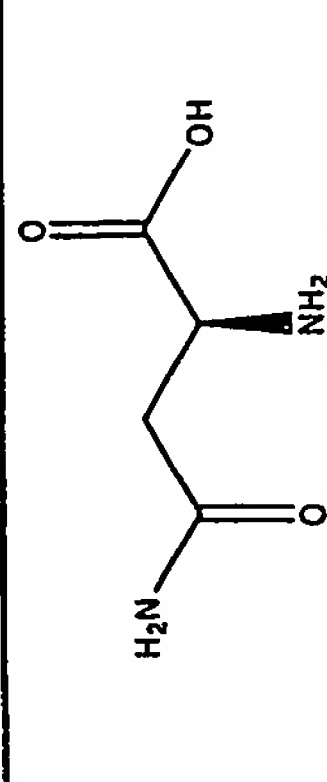
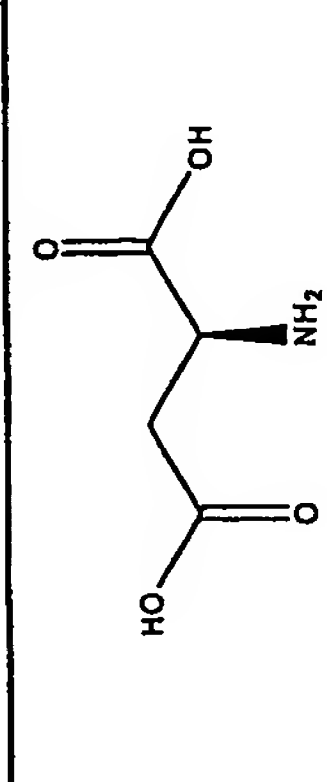
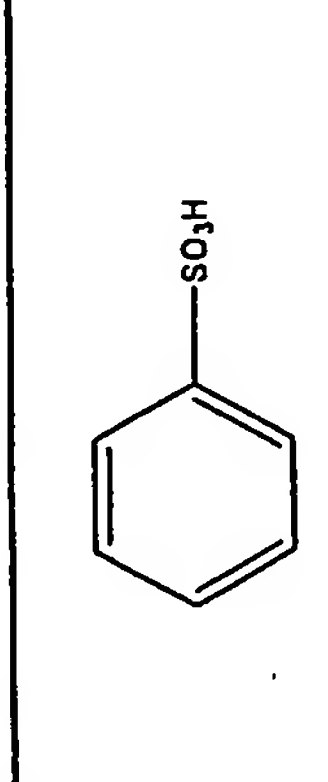
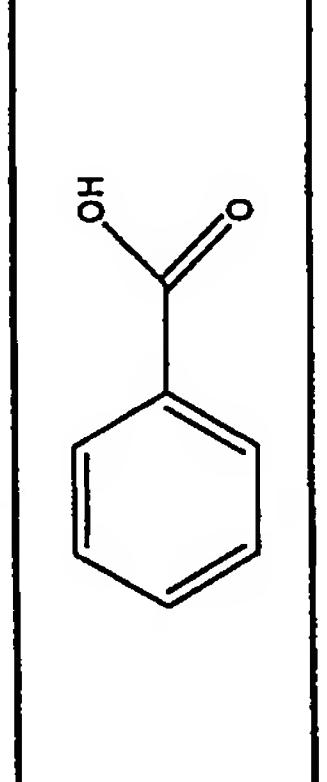
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Arginine	174.2	244 (dec.)	1	Amine, COOH	2	7		2.18, 9.09, 13.2
Ascorbic acid	176.12	190-192	1	C=O, OH	6	4		4.17, 11.57
Asparagine	132.12	234-235	1	Amine, amide, COOH	3	5		2.02, 8.5
Aspartic acid	133.1	270-271	1	Amine, COOH	2	4		1.88, 3.65, 9.60
Benzenesulfonic Acid	158.18	43-44	1	SO3H	2	1		0.70, 1.58
Benzoic acid*	122.12	122-123	2	COOH	1	1		4.19

TABLE I

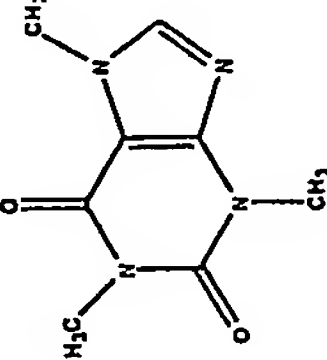
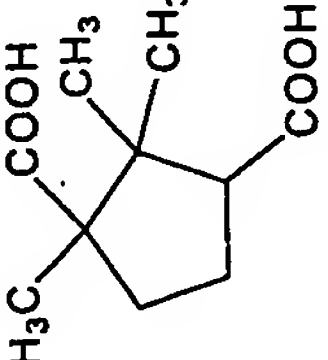
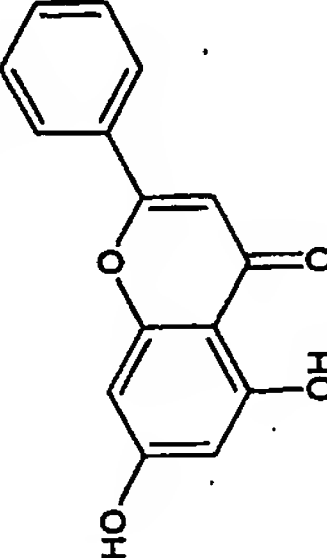
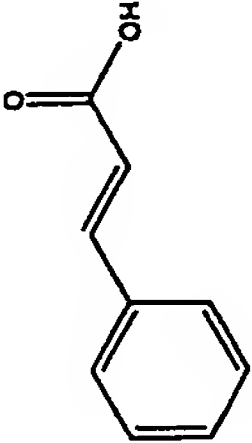
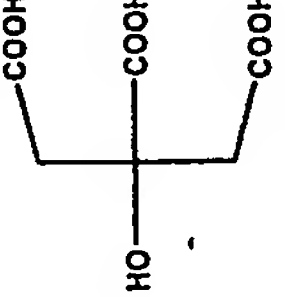
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Caffeine	194.19	238	3	C=O	3	0		
Camphoric acid	200.23	186-189	2	Carboxylic acid	2	2		4.72, 5.83
Capric acid	172.27	31.4	1	Carboxylic acid	1	1	$\text{CH}_3(\text{CH}_2)_8\text{COOH}$	4.9
Chrysin	254.24	285	1	Phenol, ether, ketone	2	2		
Cinnamic acid	144.2	133	3	Carboxylic acid	1	1		4.4
Citric Acid	192.12	153	1	OH, COOH	4	4		3.13, 4.76, 6.40

TABLE I

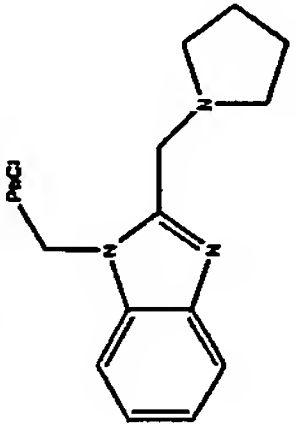
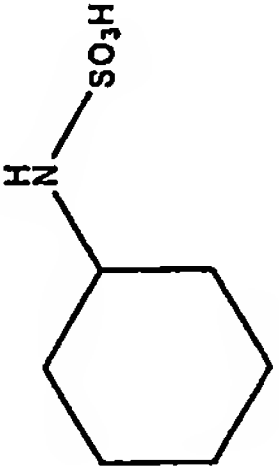
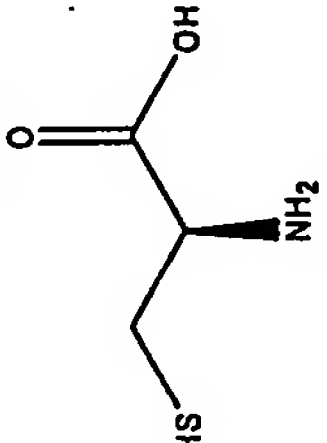
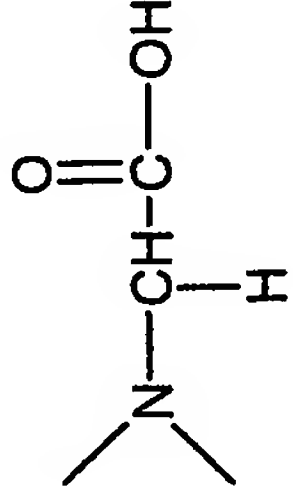
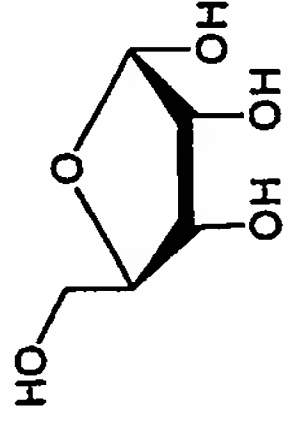
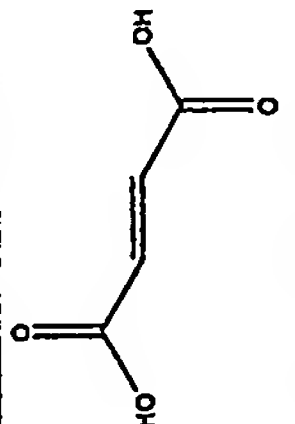
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Clemizole	325.84	167	1	Pyrrolidine	3	0		
Cyclamic acid	179.24	169-170	3	NH, SO <sub>3</sub> H	2	2		-2
Cysteine	121.15	---	1	Amine, COOH, SH	2	4		1.71, 8.33, 10.78
Dimethylglycine	103.1	178-192	1	Amine, Carboxylic acid	2	1		2.5
D-Ribose	150.13	87	1	Alcohol, ether	1	4		
Fumaric acid	116.07	287	1	COOH	2	2		3.03, 4.38

TABLE I

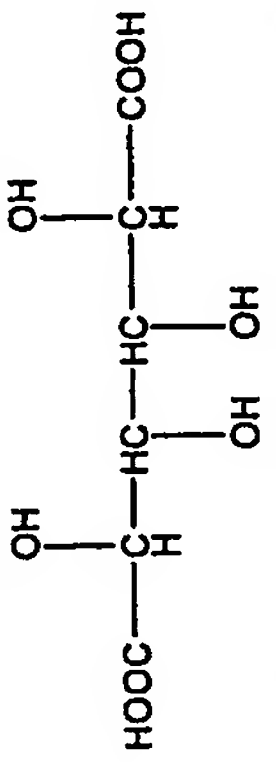
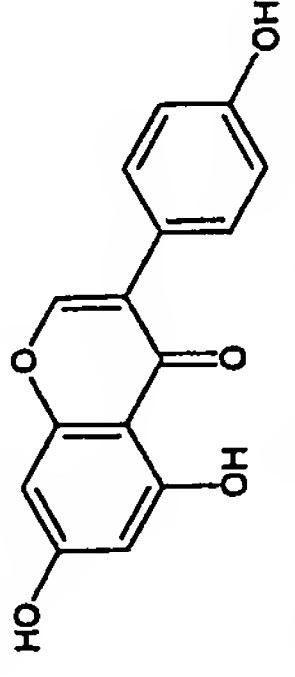
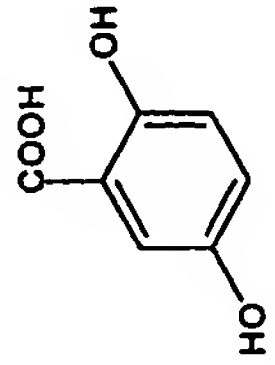
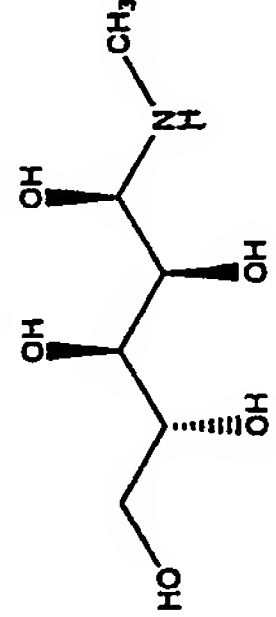
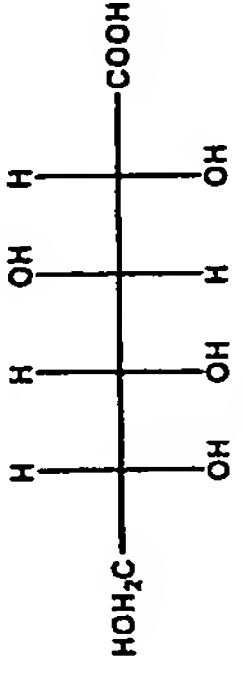
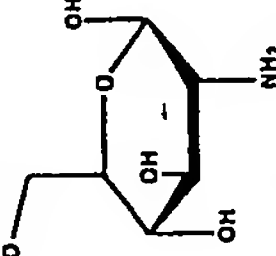
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Galactaric acid	210.14	255 (dec)	1	Carboxylic acid, alcohol	2	6		3.08, 3.63
Genistein	270.24	297-298	1	Alcohol, Phenol, ether, ketone	2	3		
Gentisic acid	154.12	199-200 form I, 205 form II	2	Carboxylic acid, alcohol, phenol	1	3		2.93
Glucamine, N-Methyl	195.22	128-129	1	Alcohol, Amine	5	6		8.03(B)
Gluconic acid	196.15	131	1	OH, COOH	6	6		3.76
Glucosamine	179.17	88	1	OH	5	6		6.91



TABLE I

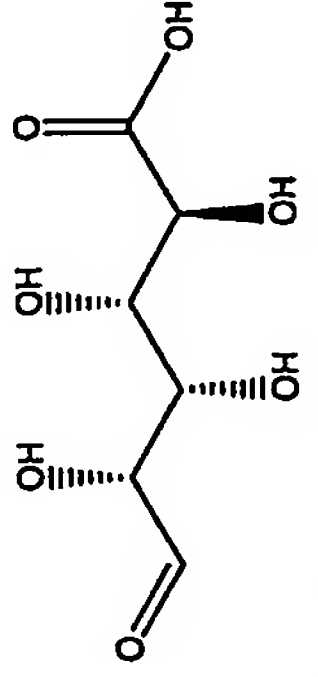
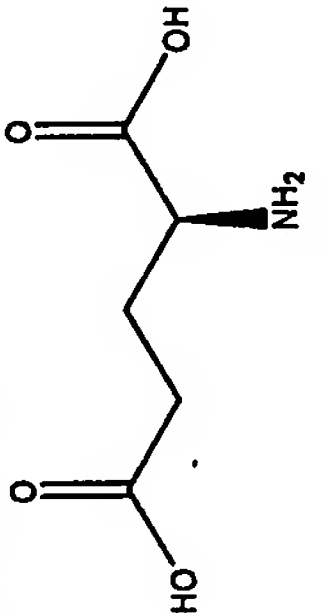
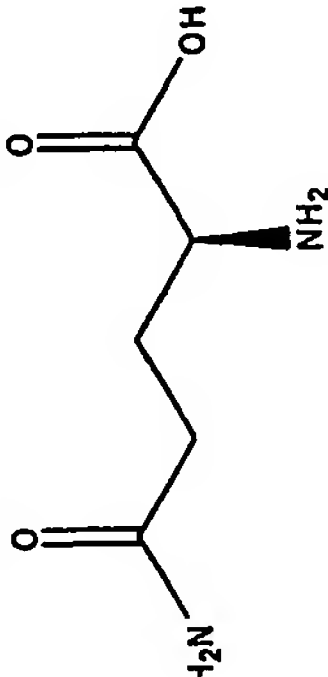
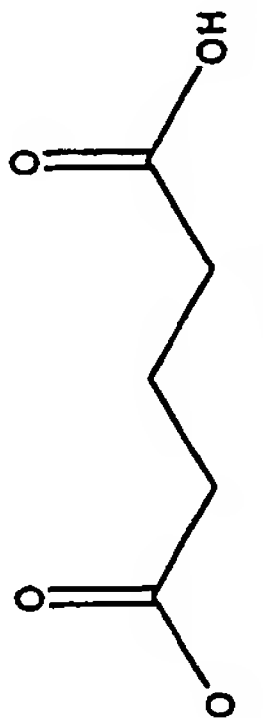
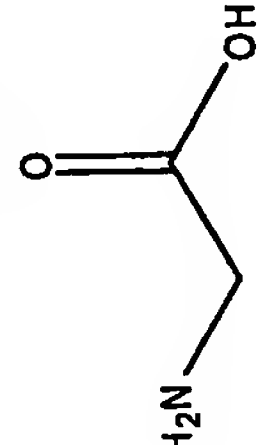
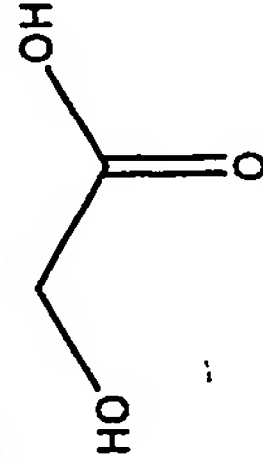
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Glucuronic acid	194.14	165	1	Carboxylic acid, alcohol, aldehyde	2	5		3.18
Glutamic acid	147.13	160	1	Amine, COOH	2	4		2.19, 4.25, 9.67
Glutamine	146.15	185-186	1	Amine, Amide, COOH	2	5		2.17, 9.13
Glutaric acid	132.11	98-98	1	COOH	2	2		2.7, 4.5
Glycine	75.07	182	1	Amine, COOH	2	3		2.34, 9.6
Glycolic acid	76.05	80	1	OH, COOH	2	2		3.82

TABLE I

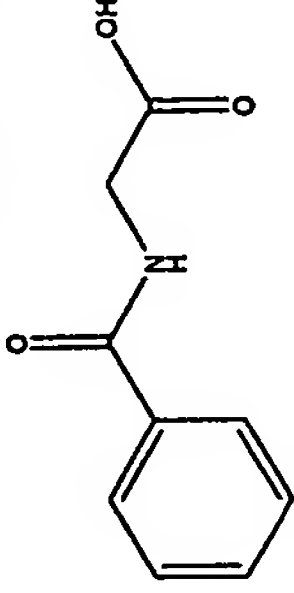
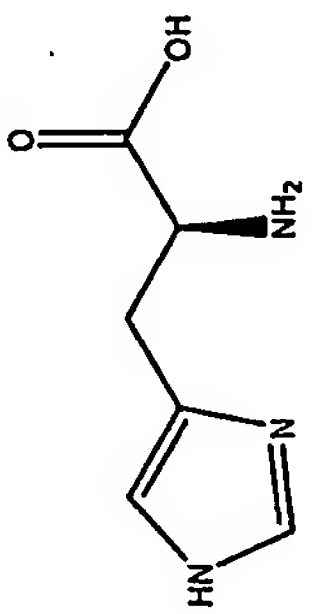
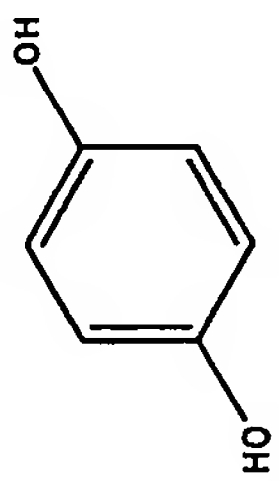
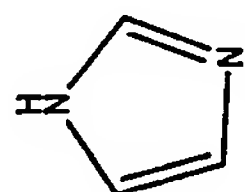
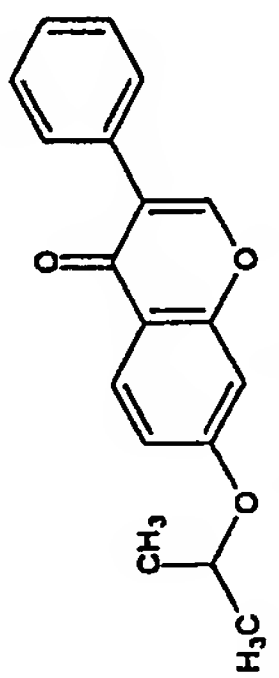
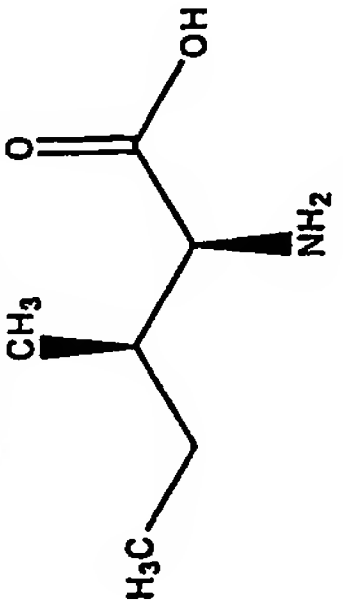
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Hippuric acid	179.17	187-188	1	Amide, NH, COOH	2	2		3.55
Histidine	155.16	287 (dec.)	1	Amine, COOH, Imidazole	2	4		1.78, 5.97, 8.97
Hydroquinone*	110.11	170-171	2	OH, Phenol	2	2		~10
Imidazole	68.08	90-91	1	NH	1	1		6.92
Ipriflavone	280.32	115-117	1	Ketone, ether	3	0		
Isoleucine	131.17	168-170 (sub.)	1	Amine, COOH	1	3		2.32, 9.76

TABLE I

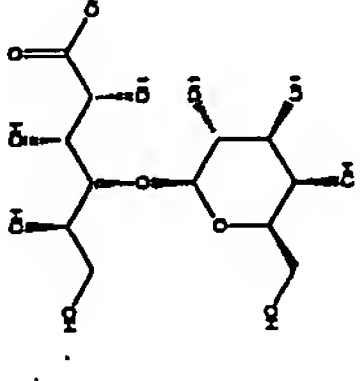
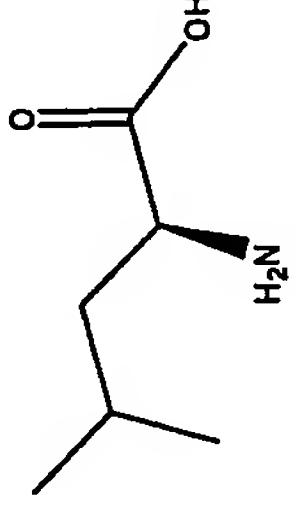
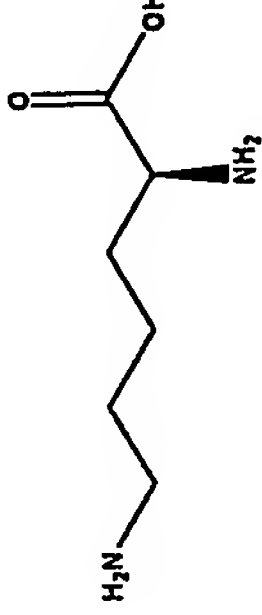
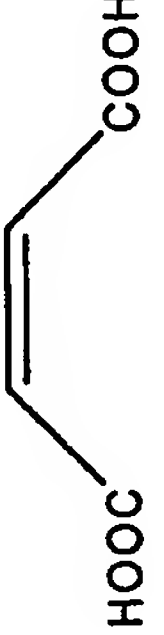
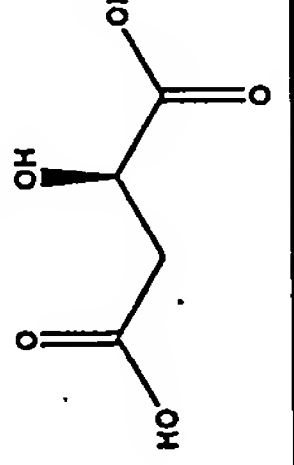
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Lactobionic acid	358.3	128-130	2	Alcohol, carboxylic acid, ether	1	9		3.2
Lauric acid	200.32	44-48	1	Carboxylic acid	1	1	$\text{CH}_3(\text{CH}_2)_{10}\text{COOH}$	~4.5
Leucine	131.17	145-148 (sub.)	1	Carboxylic acid, amine	1	3		2.36, 9.6
Lysine	146.19	225 (dec.)	1	Amine, COOH	1	5		2.2, 8.9, 10.28
Maleic	116.07	138-139	1	COOH	2	2		1.92, 6.23
Malic acid	134.09	131-132	1	OH, COOH	3	3		3.46, 5.1

TABLE I

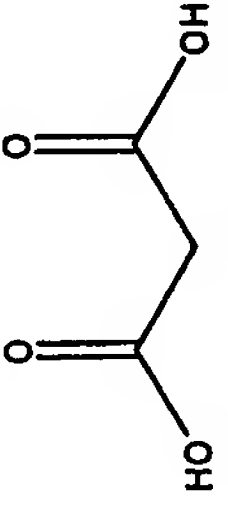
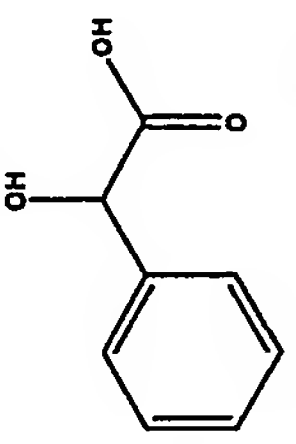
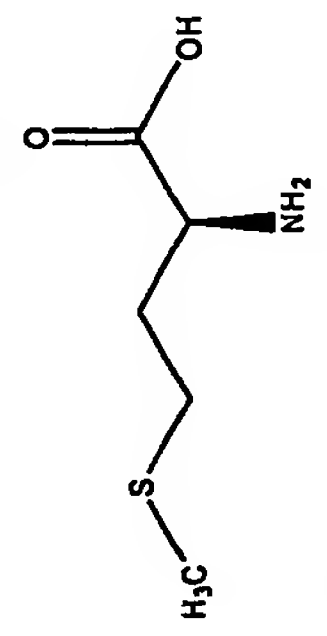
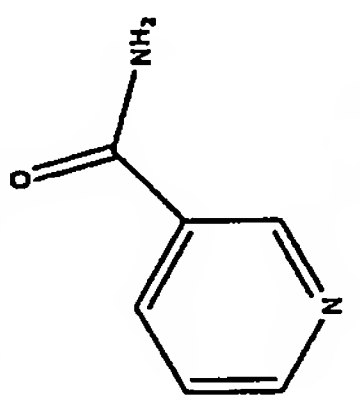
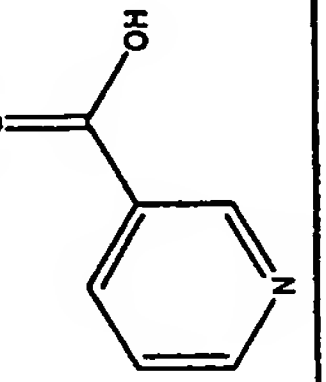
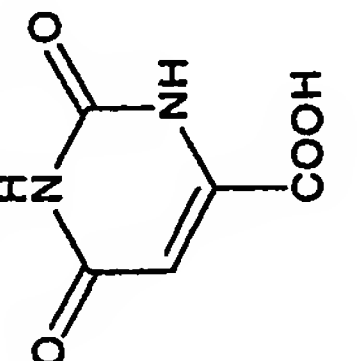
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Malonic	104.06	135	1	COOH	2	2		2.83, 5.70
Mandelic acid	152.15	119	1	OH, COOH	2	2		3.37
Methionine	149.21	280-282 (dec.)	1	Amine, COOH, S-Me	2	3		2-3, 9
Nicotinamide	122.12	128-131	1	Pyridine, amide	2	2		3.3
Nicotinic acid	123.11	236-237	2	Carboxylic acid, pyridine	2	1		2.07(B), 4.85
Crotonic acid	156.1	345-346	2	Carboxylic acid, lactam	3	3		5.85, 8.95

TABLE I

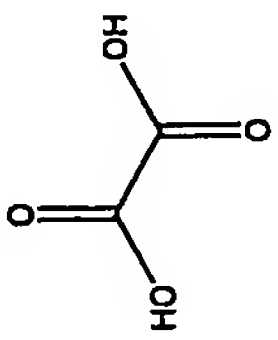
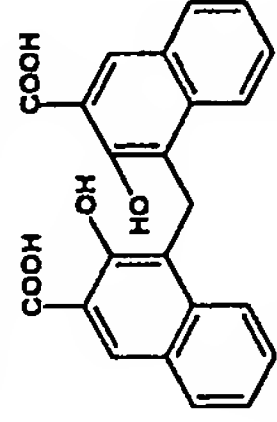
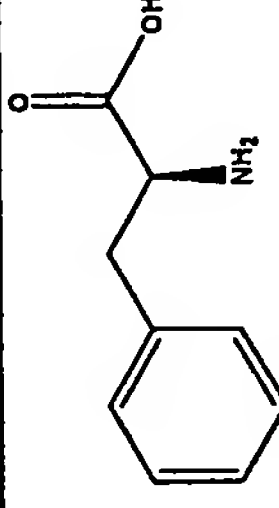
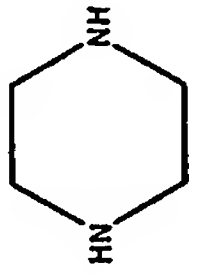
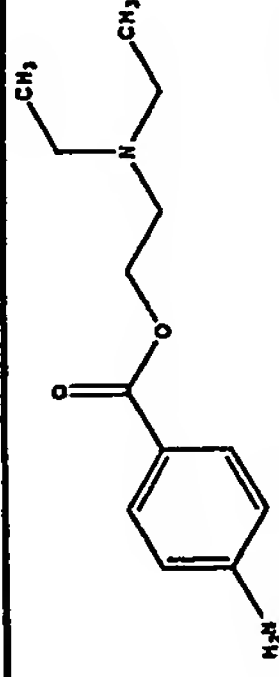
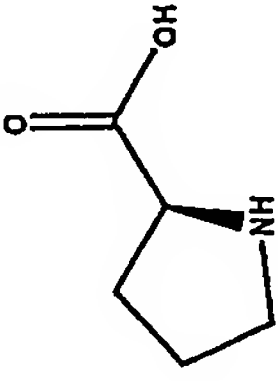
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Oxalic acid	90.04	189 (dec)	2	Carboxylic acid	2	2		1.27, 4.27
Palmitic acid	256.43	63-64	1	Carboxylic acid	1	1	$\text{CH}_3(\text{CH}_2)_{14}\text{COOH}$	4.9
Pamoic	388.38	280 (dec)	2	Carboxylic acid, phenol	2	4		2.51, 3.1
Phenylalanine	165.19	283 (dec.)	1	Amine, COOH	1	3		~2, ~9
Piperazine	86.14	106	1	NH	0	2		9.82(B)
Procaine	236.31	61	1	Amine, C=O	2	2		8.9(B)
Proline	115.13	220-222 (dec.)	1	COOH, NH	1	2		1.99, 10.6



TABLE I

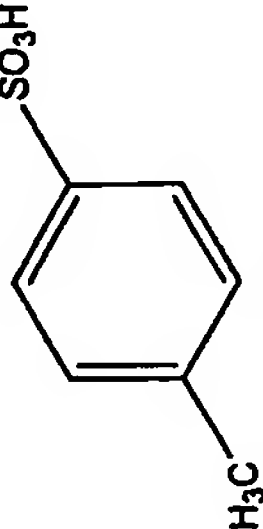
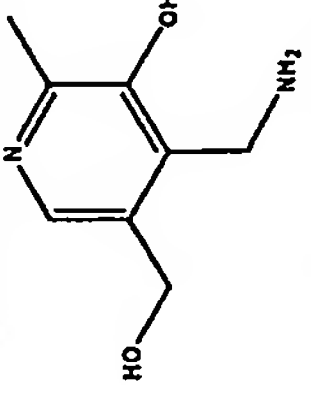
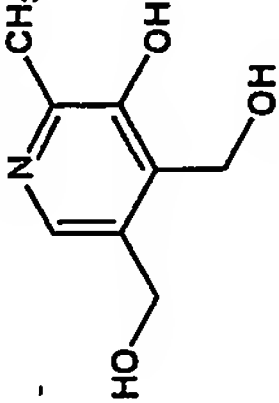
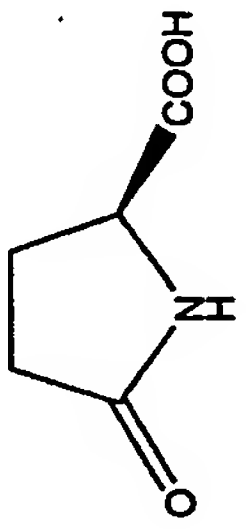
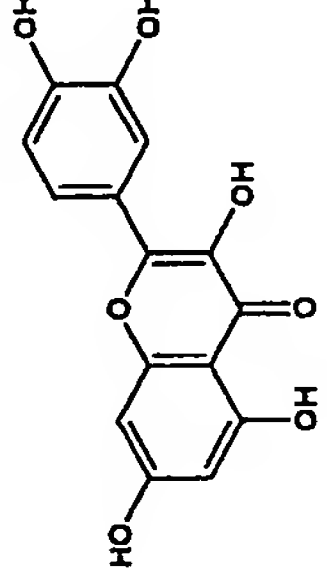
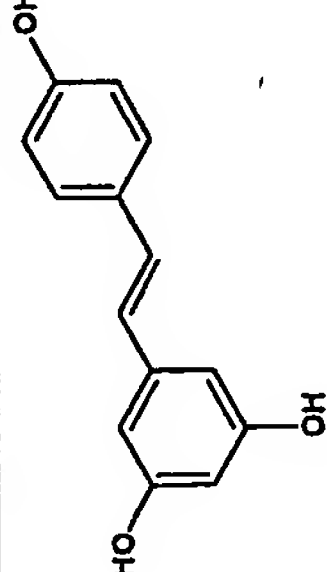
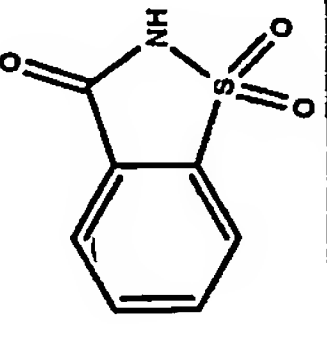
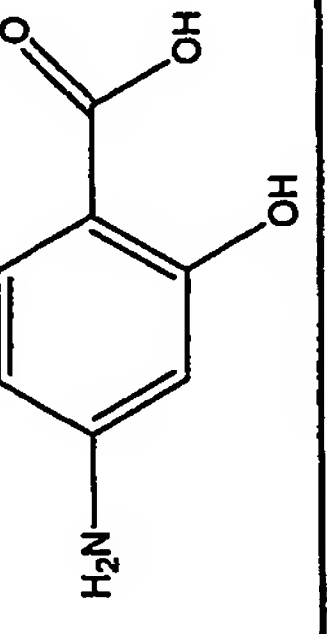
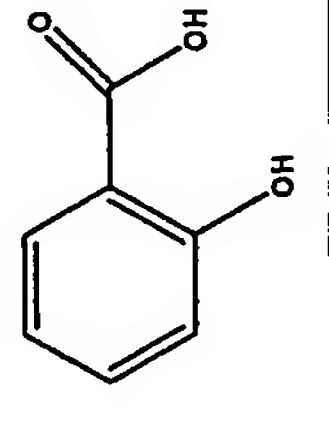
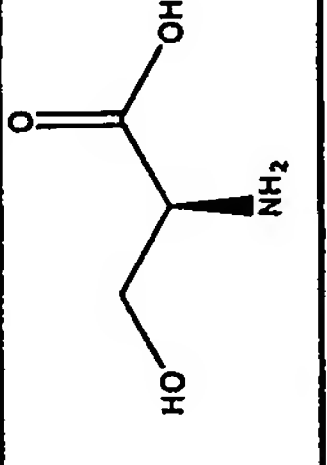
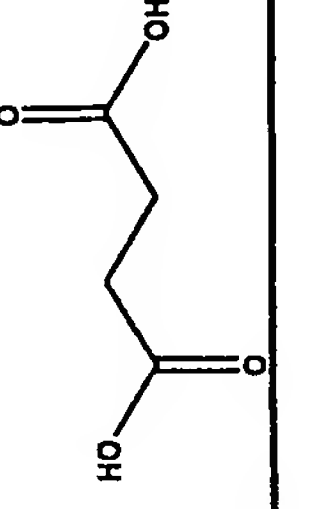
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
p-Toluenesulfonic acid	172.2	106-107	2	Sulfonic acid	2	1		-1.34
Pyridoxamine	168	193-194	2	OH, Amine, Pyridine	3	4		~9
Pyridoxine	170	160	2	Alcohol, Pyridine	3	3		~9
Pyroglutamic acid	129.12	162	2	Carboxylic acid, Lactam	2	2		3.32
Quercetin	302.24	314 dec.	1	Phenol, ether, ketone	2	5		
Resveratrol	228.24	253-255	1	Phenol	0	3		

TABLE I

Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Saccharin	183.19	228-230	1	Amide, C=O, S=O, N-H	3	1		2
Salicylic acid, 4-amino	153.14	150-151	3	COOH, OH, Aniline	1	4		3.25, 10, 3.5(B)
Salicylic acid	138.12	159	3	COOH, OH	2	2		2.98, 13.82
Sebacic acid	202.25	134.5	1	Carboxylic acid	2	2	HOOC(CH <sub>2</sub> ) <sub>8</sub> COOH	4.59, 5.59
Serine	105.09	228 (dec.)	1	Carboxylic acid, amine, OH	2	3		2.21, 9.15
Stearic acid	284.47	70-71	1	Carboxylic acid	1	1	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>16</sub> COOH	4.9
Succinic acid	118.09	185-187	1	Carboxylic acid	2	2		4.21, 5.64

PCT/US03/27472

TABLE I

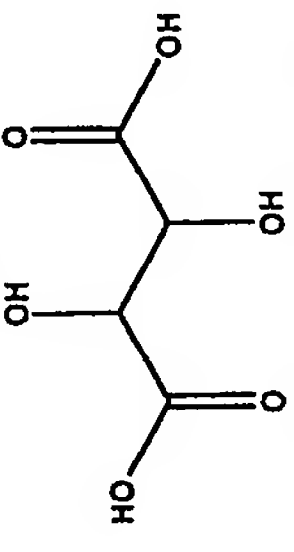
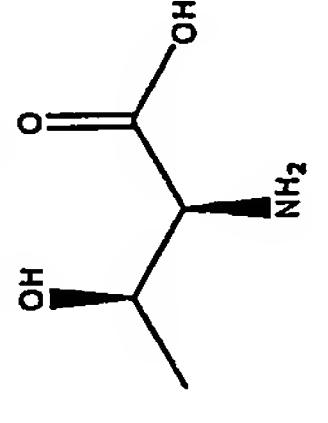
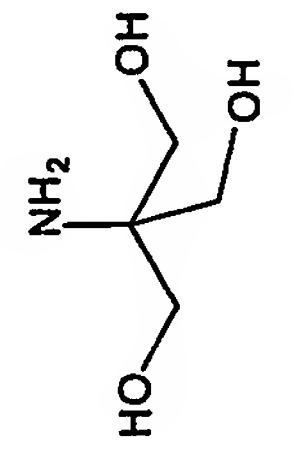
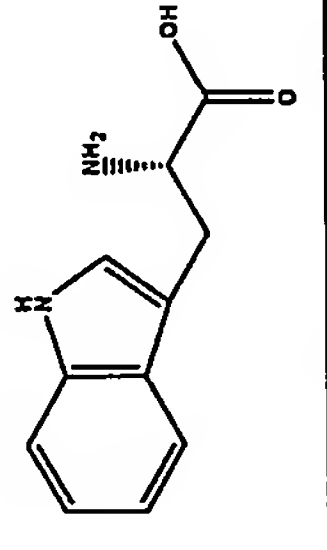
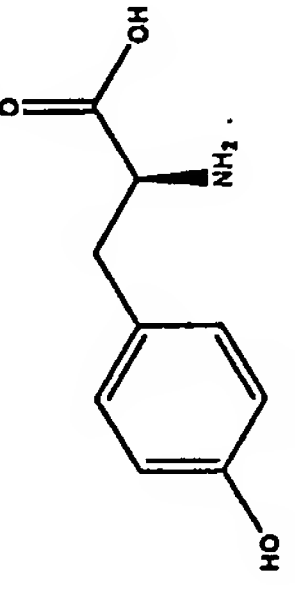
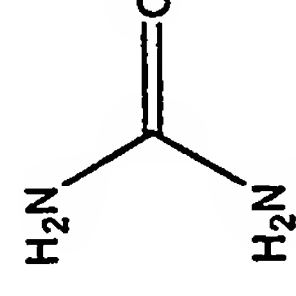
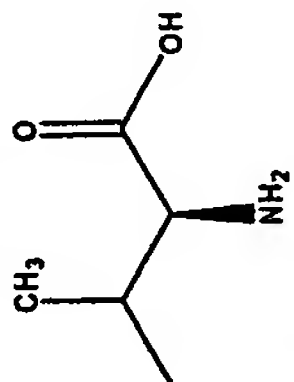
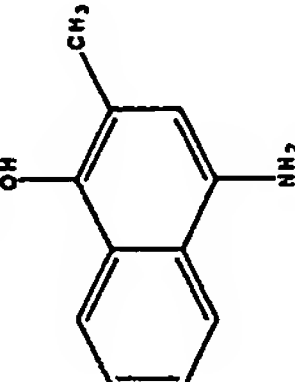
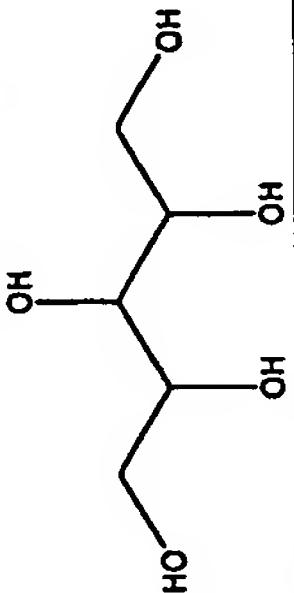
Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Tartaric acid	150.09	205-206	1	Carboxylic acid	4	4		3.02, 4.36
Threonine	119.12	255-257 (dec.)	1	Amine, COOH, OH	2	4		2.15, 9.12
TRIS	121.13	171-172	2	Amine, OH	3	5		5.91, 8.3
Tryptophan	204.23	289 (dec.)	1	Amine, COOH, Indole	1	4		2.38, 9.39
Tyrosine	181.19	342-344	1	Amine; COOH, OH	2	3		2.2, 9.11, 10.07
Urea	60.06	Dec.	1	C=O, NH2	1	4		~8

TABLE I

Co-Crystal Former	MW (g/mol)	MP (°C)	Class	Functionality	# acceptors	# donors	Molecular Structure	pKa Values
Valine	117.15	315	1	Amine, COOH	1	3		~4.5, ~9
Vitamin K5	209.68	280-282 (dec.)	3	Amine, OH	1	3		~9
Xylitol	152.15	93-95 (l)	2	OH	5	5		~9

## TABLE II

Co-crystal Former	Co-crystal Former Functional Group	Interacting Group					Carboxylic				
1,5-Napthalene-disulfonic Acid	Sulfonic Acid	pyridine	ketone	aldehyde	ether	ester	amide	aniline	aniline	amide	Carboxylic Acid
1-Hydroxy-2-naphthoic acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
1-Hydroxy-2-naphthoic acid	alcohol	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
4-Aminobenzoic Acid	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
4-Aminobenzoic Acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
4-aminopyridine	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
4-aminopyridine	Pyridine	*alcohol	pyridinium	*	*amide	nitro	*amide	*amine	*amine	*amine	*Carboxylic Acid
4-Chlorobenzene-Sulfonic Acid	Sulfonic Acid	pyridine	ketone	aldehyde	ether	ester	ether	amide	amide	amide	Carboxylic Acid
4-ethoxyphenyl Urea	Amide	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
4-ethoxyphenyl Urea	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
7-oxo-DHEA	alcohol	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
7-oxo-DHEA	Ketone	alcohol		thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Acesulfame	Sulfone	pyridine	ketone	aldehyde	ether	ester	ether	amide	amide	amide	carboxylic acid
Acesulfame	Amide	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Acetohydroxamic Acid	Amide	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Acetohydroxamic Acid	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Acetohydroxamic Acid	Alcohol	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Adenine	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Adenine	N	*alcohol	pyridinium	*	*amide	nitro	*amide	*amine	*amine	*amine	*carboxylic acid
Adipic acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Alanine	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Alanine	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Allopurinol	Alcohol	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Allopurinol	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Arginine	Amine	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Arginine	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Ascorbic Acid	Ketone	alcohol		thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Ascorbic Acid	Alcohol	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol
Ascorbic Acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	amide	aniline	aniline	aniline	phenol



TABLE II

Co-crystal Former	amine phosphate phosphate phosphate phosphate phosphate	metals sulfate sulfate sulfate sulfate sulfate	thioether sulfone sulfone sulfone sulfone sulfone	nitrate nitrate nitrate nitrate nitrate	sulfate pyridine pyridine pyridine pyridine pyridine	alcohol carboxylic acid carboxylic acid	metals metals carboxylic acid Carboxylic Acid carboxylic acid	aldehyde aldehyde metals metals metals
1,5-Napthalene-disulfonic Acid								
1-Hydroxy-2-naphthoic acid								
1-Hydroxy-2-naphthoic acid								
4-Aminobenzoic Acid								
4-Aminobenzoic Acid								
4-aminopyridine								
4-aminopyridine	*sulfonamide	*ketone	ether	triazole		ammonium	oxime	*chlorine
4-Chlorobenzene-Sulfonic Acid	amine phosphate phosphate phosphate phosphate	metals sulfate sulfate sulfate sulfate	thioether sulfone sulfone sulfone sulfone	nitrate nitrate nitrate nitrate	sulfate pyridine pyridine pyridine pyridine	alcohol	Carboxylic Acid carboxylic acid metals Carboxylic Acid	metals metals aldehyde metals
4-ethoxyphenyl Urea								
4-ethoxyphenyl Urea								
7-oxo-DHEA								
7-oxo-DHEA								
Acesulfame	amine phosphate phosphate phosphate phosphate phosphate	metals sulfate sulfate sulfate sulfate sulfate	thioether sulfone sulfone sulfone sulfone sulfone	nitrate nitrate nitrate nitrate nitrate	sulfate pyridine pyridine pyridine pyridine pyridine	alcohol	Carboxylic Acid carboxylic acid carboxylic acid Carboxylic Acid carboxylic acid	metals metals metals metals metals
Acesulfame								
Acetohydroxamic Acid								
Acetohydroxamic Acid								
Acetohydroxamic Acid								
Adenine								
Adenine	*sulfonamide phosphate phosphate phosphate phosphate phosphate phosphate phosphate phosphate	*ketone sulfate sulfate sulfate sulfate sulfate sulfate sulfate sulfate	ether sulfone sulfone sulfone sulfone sulfone sulfone sulfone sulfone	triazole nitrate nitrate nitrate nitrate nitrate nitrate nitrate nitrate	pyridine pyridine pyridine pyridine pyridine pyridine pyridine pyridine pyridine	ammonium	oxime carboxylic acid carboxylic acid carboxylic acid Carboxylic Acid carboxylic acid carboxylic acid carboxylic acid Carboxylic Acid Carboxylic Acid carboxylic acid	*chlorine metals metals metals metals metals metals metals metals metals metals
Adipic acid								
Alanine								
Alanine								
Allopurinol								
Allopurinol								
Arginine								
Arginine								
Ascorbic Acid								
Ascorbic Acid								
Ascorbic Acid								

TABLE II

Co-crystal Former	ester	ether	cyano	thionedisulfide	furan	bromine	chlorine	s-heterocyclic
1,5-Naphthalene-disulfonic Acid	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
1-Hydroxy-2-naphthoic acid	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
1-Hydroxy-2-naphthoic acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
4-Aminobenzoic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
4-Aminobenzoic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
4-aminopyridine		thiol	n-heterocyclic ring	thionedisulfide	pyrrolidindione	iodine	hydrazone	thiocyanate
4-aminopyridine								
4-Chlorobenzene-Sulfonic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
4-ethoxyphenyl Urea	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
4-ethoxyphenyl Urea	ester	ether	cyano	cyano	bromine	bromine	chlorine	s-heterocyclic
7-oxo-DHEA	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
7-oxo-DHEA								
Acesulfame	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Acesulfame	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Acetohydroxamic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Acetohydroxamic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Acetohydroxamic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Adenine	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Adenine		thiol	n-heterocyclic ring	thionedisulfide	pyrrolidindione	iodine	hydrazone	thiocyanate
Adipic acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Alanine	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Alanine	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Allopurinol	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Allopurinol	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Arginine	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Arginine	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Arginine	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Ascorbic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Ascorbic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine
Ascorbic Acid	aldehyde	ester	ether	cyano	furan	furan	bromine	chlorine

TABLE II

Co-crystal Former	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	phosphoric acid
1,5-Napthalene-disulfonic Acid	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine
1-Hydroxy-2-naphthoic acid	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine
1-Hydroxy-2-naphthoic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
4-Aminobenzoic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
4-Aminobenzoic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
4-aminopyridine	*bromine		hydroxamic acid	cyano	*sulfonic acid	*phosphoric acid
4-aminopyridine						
4-Chlorobenzene-Sulfonic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
4-ethoxyphenyl Urea	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
4-ethoxyphenyl Urea	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine
7-oxo-DHEA	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
7-oxo-DHEA						
Acesulfame	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Acesulfame	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Acetohydroxamic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Acetohydroxamic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Acetohydroxamic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Adenine	*bromine		hydroxamic acid	cyano	*sulfonic acid	*phosphoric acid
Adenine	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Adipic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Alanine	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Alanine	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Allopurinol	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Allopurinol	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Arginine	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Arginine	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Ascorbic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Ascorbic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	
Ascorbic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	phosphate ester	

[illegible]

TABLE II

Co-crystal Former		epoxide	peroxide
1,5-Napthalene-disulfonic Acid			
1-Hydroxy-2-naphthoic acid	iodine		
1-Hydroxy-2-naphthoic acid	iodine		
4-Aminobenzoic Acid	iodine		
4-Aminobenzoic Acid			
4-aminopyridine			
4-aminopyridine			
4-Chlorobenzene-Sulfonic Acid			
4-ethoxyphenyl Urea	iodine	epoxide	peroxide
4-ethoxyphenyl Urea	iodine		
7-oxo-DHEA			
7-oxo-DHEA	iodine		
Acesulfame			
Acesulfame	iodine	epoxide	peroxide
Acetohydroxamic Acid	iodine	epoxide	peroxide
Acetohydroxamic Acid	iodine		
Acetohydroxamic Acid	iodine	epoxide	
Adenine	iodine		
Adenine			
Adipic acid	iodine		
Alanine	iodine		
Alanine	iodine		
Allopurinol	iodine	epoxide	
Allopurinol	iodine		
Arginine	iodine		
Arginine	iodine		
Ascorbic Acid	iodine		
Ascorbic Acid	iodine	epoxide	
Ascorbic Acid	iodine		



TABLE II

Co-crystal Former	Co-crystal Former Functional Group	Interacting Group	thiol	amide	amine	aniline	phenol
Asparagine	Amine	alcohol	ketone	ketone	amine	aniline	phenol
Asparagine	Amide	alcohol	ketone	ketone	amine	aniline	phenol
Asparagine	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Aspartic Acid	Amine	alcohol	ketone	ketone	amine	aniline	phenol
Aspartic Acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	Carboxylic
Benzenesulfonic Acid	Sulfonic Acid	pyridine	ketone	ketone	ester	amide	Acid
Benzoic Acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Caffeine	Ketone	alcohol	ketone	ketone	amine	aniline	phenol
Camphoric acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Capric acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Genistein	Ketone	alcohol	ketone	ketone	amine	aniline	phenol
Genistein	Phenol	amine	amide	amide	pyridine	cyano	aldehyde
Genistein	Ether	aromatic-N	amide	amide	Sp2 amine	sulfoxide	chlorate
Cinnamic acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Citric Acid	Alcohol	alcohol	ketone	ketone	amine	aniline	phenol
Citric Acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Clemizole	Pyrrolidine	*alcohol	pyridinium	pyridinium	nitro	*amine	*carboxylic
Cyclamic Acid	Amine	alcohol	ketone	ketone	amine	aniline	acid
Cyclamic Acid	Sulfonic Acid	pyridine	ketone	ketone	ester	amide	phenol
Cysteine	Amine	alcohol	ketone	ketone	amine	aniline	Carboxylic
Cysteine	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	Acid
Cysteine	Thiol	carboxylic acid	ketone	ketone	amine	aniline	phenol
Cysteine	Carboxylic Acid	alcohol	ketone	ketone	-N	cadmium	phenol
Dimethylglycine	Amine	alcohol	ketone	ketone	amine	aniline	phenol
Dimethylglycine	Ether	alcohol	ketone	ketone	amine	aniline	phenol
D-ribose	Alcohol	alcohol	ketone	ketone	Sp2 amine	sulfoxide	chlorate
D-ribose	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Fumaric Acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Galactaric acid	Carboxylic Acid	alcohol	ketone	ketone	amine	aniline	phenol
Galactaric acid	alcohol	alcohol	ketone	ketone	amine	aniline	phenol
Chrysin	Ketone	alcohol	ketone	ketone	amine	aniline	phenol

<b>Co-crystal Former</b>	phosphate phosphate phosphate phosphate phosphate	sulfate sulfate sulfate sulfate sulfate	sulfone sulfone sulfone sulfone sulfone	nitrate nitrate nitrate nitrate nitrate	pyridine pyridine pyridine pyridine pyridine	carboxylic acid Carboxylic Acid carboxilic acid carboxilic acid carboxilic acid	metals metals metals metals metals
Benzenesulfonic Acid	amine	metals	thioether	nitrates	sulfate	alcohol	metals
Benzoic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Caffeine	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Camphoric acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Capric acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Genistein	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Genistein	alcohol			ester	ether	n-oxide	fluorine
Genistein	chlorine		ciano	ester	amine	nitro	bromine
Cinnamic acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Citric Acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Citric Acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Clemizole	*sulfonamide	*ketone	ether	triazole		ammonium	*chlorine
Cyclamic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Cyclamic Acid	amine	metals	thioether	nitrate	sulfate	alcohol	metals
Cysteine	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Cysteine	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Cysteine	arsenic	chlorine	alcohol	potassium	Ru		Sb
Dimethylglycine	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Dimethylglycine	phosphate	sulfate	sulfone	nitrate	pyridine		metals
D-ribose	chlorine		ciano	ester	amine	nitro	bromine
D-ribose	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Fumaric Acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Galactaric acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Galactaric acid	phosphate	sulfate	sulfone	nitrate	pyridine		metals
Chrysin	phosphate	sulfate	sulfone	nitrate	pyridine	carboxilic acid	aldehyde
	phosphate	sulfate	sulfone	nitrate	pyridine		metals
	phosphate	sulfate	sulfone	nitrate	pyridine		metals

TABLE II

Co-crystal Former	aldehyde	ester	ether	cyano	sulfate	phosphate	bromine	chlorine
Asparagine	aldehyde	ester	ether	cyano		phosphate	bromine	chlorine
Asparagine	aldehyde	ester	ether	cyano			bromine	chlorine
Asparagine	aldehyde	ester	ether	cyano			bromine	chlorine
Aspartic Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Aspartic Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Benzenesulfonic Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Benzoic Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Caffeine	aldehyde	ester	ether	cyano			bromine	chlorine
Camphoric acid	aldehyde	ester	ether	cyano			bromine	chlorine
Capric acid	aldehyde	ester	ether	cyano			bromine	chlorine
Genistein	aldehyde	ester	ether	cyano			bromine	chlorine
Genistein	bromine	iodine	ketone	sulfonic acid			phosphonic acid	carboxylic acid
Genistein	aldehyde	ketone	peroxide	epoxide			heterocyclic-S	iodine
Cinnamic acid	aldehyde	ester	ether	cyano			bromine	chlorine
Citric Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Citric Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Clemizole		thiol	n-heterocyclic	thionedisulfide	pyrrolidindione		hydrazone	thiocyanate
Cyclamic Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Cyclamic Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Cysteine	aldehyde	ester	ether	cyano			bromine	chlorine
Cysteine	aldehyde	ester	ether	cyano			bromine	chlorine
Cysteine	aldehyde	ester	ether	cyano			bromine	chlorine
Dimethylglycine	aldehyde	ester	ether	cyano			bromine	chlorine
Dimethylglycine	aldehyde	ester	ether	cyano			bromine	chlorine
D-ribose	aldehyde	ketone	peroxide	epoxide			heterocyclic-S	iodine
D-ribose	aldehyde	ester	ether	cyano			bromine	chlorine
Fumaric Acid	aldehyde	ester	ether	cyano			bromine	chlorine
Galactaric acid	aldehyde	ester	ether	cyano			bromine	chlorine
Galactaric acid	ester	ether	ether	cyano			bromine	chlorine
Chrysin	aldehyde	ester	ether	cyano			chlorine	s-heterocyclic

TABLE II

Co-crystal Former	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Asparagine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Asparagine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Asparagine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Aspartic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Aspartic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Benzenesulfonic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Benzoic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Caffeine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Camphoric acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Capric acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Genistein	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Genistein	nitro	sulfone	aniline	sulfate	sulfone	alcohol
Genistein	ester	ether	carboxylic acid	n-heterocyclic	ketone	phosphate ester
Cinnamic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Citric Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Citric Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Clemizole	*bromine	pyridine	hydroxamic acid	cyano	carboxamide	*sulfonic acid
Cyclamic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Cyclamic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Cysteine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Cysteine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Cysteine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Dimethylglycine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Dimethylglycine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
D-ribose	ester	ether	carboxylic acid	sulfate	sulfone	alcohol
D-ribose	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
D-ribose	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Fumaric Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Galactaric acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Galactaric acid	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine
Chrysin	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester

## TABLE II

Co-crystal Former	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Asparagine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Asparagine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Asparagine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Aspartic Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Aspartic Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Benzenesulfonic Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Benzoic Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Caffeine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Camphoric acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Capric acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Genistein	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Genistein	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Genistein	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Cinnamic acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Citric Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Citric Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Clemizole	N-oxide	ester	ether	fluorine	dithiadiazocyclopentadienyl	thiourea
Cyclamic Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Cyclamic Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Cyclamic Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Cysteine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Cysteine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Cysteine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Dimethylglycine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Dimethylglycine	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
D-ribose	fluorine	phosphate	cyanamide	BF4	N-SO2	thiourea
D-ribose	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Fumaric Acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Galactaric acid	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea
Galactaric acid	carbamate	imidazole	BF4	BF4	N-SO2	thiourea
Chrysin	fluorine	carbamate	imidazole	BF4	N-SO2	thiourea



TABLE II

Co-crystal Former	iodine	epoxide	peroxide
Asparagine	iodine		
Asparagine	iodine		
Asparagine	iodine		
Aspartic Acid	iodine		
Aspartic Acid	iodine		
Benzenesulfonic Acid			
Benzoic Acid	iodine		
Caffeine	iodine		
Camphoric acid	iodine		
Capric acid	iodine		
Genistein	iodine		
Genistein			
Genistein			
Cinnamic acid	iodine	epoxide	
Citric Acid	iodine		
Citric Acid	iodine		
Clemizole			
Cyclamic Acid	iodine		
Cyclamic Acid			
Cysteine	iodine		
Cysteine	iodine		
Cysteine			
Dimethylglycine	iodine		
Dimethylglycine	iodine		
D-ribose			
D-ribose	iodine	epoxide	
Fumaric Acid	iodine		
Galactaric acid	iodine		
Galactaric acid	iodine		
Chrysin	iodine		

TABLE II

Co-crystal Former	Co-crystal Former Functional Group	Interacting Group	sulfoxide	n aromatic_s	pyridine	cyano	aldehyde
Chrysin	Phenol	amine	amine	amide	Sp2 amine	sulfoxide	chlorate
Chrysin	Ether	aromatic-N	thiol	amide	amine	aniline	phenol
Gentisic acid	Carboxylic Acid	alcohol	sulfoxide	n	pyridine	cyano	aldehyde
Gentisic acid	Phenol	amine	thiol	amide	amine	aniline	phenol
Glucamine, N-methyl	alcohol	alcohol	thiol	amide	amine	aniline	phenol
Glucamine, N-methyl	Amine	alcohol	thiol	amide	amine	aniline	phenol
Gluconic Acid	Alcohol	alcohol	thiol	amide	amine	aniline	phenol
Gluconic Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Glucosamine	alcohol	alcohol	thiol	amide	amine	aniline	phenol
Glucuronic acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Glucuronic acid	alcohol	alcohol	thiol	amide	amine	aniline	phenol
Glucuronic acid	Aldehyde	alcohol	thiol	amide	amine	aniline	phenol
Glutamic Acid	Amine	alcohol	thiol	amide	amine	aniline	phenol
Glutamic Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Glutamine	Amine	alcohol	thiol	amide	amine	aniline	phenol
Glutamine	Amide	alcohol	thiol	amide	amine	aniline	phenol
Glutamine	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Glutaric Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Glycine	Amine	alcohol	thiol	amide	amine	aniline	phenol
Glycine	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Glycolic Acid	Alcohol	alcohol	thiol	amide	amine	aniline	phenol
Glycolic Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Hippuric Acid	Amide	alcohol	thiol	amide	amine	aniline	phenol
Hippuric Acid	Amine	alcohol	thiol	amide	amine	aniline	phenol
Hippuric Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Histidine	Amine	alcohol	thiol	amide	amine	aniline	phenol
Histidine	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Histidine	Imidazole	imidazole	acetamide	carboxylate	amine	thione	nitro
Hydroquinone	Alcohol	alcohol	thiol	amide	amine	aniline	phenol
Hydroquinone	Phenol	amine	sulfoxide	n	pyridine	cyano	aldehyde
Imidazole	Amine	alcohol	thiol	amide	amine	aniline	phenol

## TABLE II

[illegible]

TABLE II

Co-crystal Former	bromine	iodine	ketone	sulfonic acid	sulfate	phosphate	phosphonic acid	carboxylic acid
Chrysin	aldehyde	ketone	peroxide	epoxide		phosphate	heterocyclic-S	iodine
Chrysin	aldehyde	ester	ether	cyano		phosphate	bromine	chlorine
Gentisic acid	bromine	iodine	ketone	sulfonic acid	sulfate	bromine	phosphonic acid	carboxylic acid
Gentisic acid	ester	ether	cyano		furan		chlorine	s-heterocyclic
Glucamine, N-methyl	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glucamine, N-methyl	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Gluconic Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Gluconic Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glucosamine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glucuronic acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glucuronic acid	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
Glucuronic acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glutamic Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glutamic Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glutamic Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glutamine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glutamine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glutamine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glutaric Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glycine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glycine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glycolic Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Glycolic Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Hippuric Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Hippuric Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Hippuric Acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Histidine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
Histidine	aldehyde	ester	ether	cyano		furan	bromine	chlorine
	phosphonic acid							
	hemihydrate							
Histidine	aldehyde	chlorine	sulfonyl	sulfoxide	amide	fluorine	sulfonate ester	chlorine
Hydroquinone	aldehyde	ester	ether	cyano		furan	bromine	carboxylic acid
Hydroquinone	bromine	iodine	ketone	sulfonic acid	sulfate	phosphate	phosphonic acid	chlorine
Imidazole	aldehyde	ester	ether	cyano		furan	bromine	chlorine







TABLE II

Co-crystal Former			
Chrysin	iodine		
Chrysin			
Gentisic acid			
Gentisic acid			
Glucamine, N-methyl			
Glucamine, N-methyl	iodine	epoxide	
Gluconic Acid	iodine		
Gluconic Acid	iodine		
Glucosamine	iodine	epoxide	
Glucuronic acid	iodine		
Glucuronic acid			
Glucuronic acid	iodine	epoxide	
Glutamic Acid	iodine		
Glutamic Acid	iodine		
Glutamine	iodine		
Glutamine	iodine	epoxide	peroxide
Glutamine	iodine		
Glutaric Acid	iodine		
Glycine	iodine		
Glycine	iodine		
Glycolic Acid	iodine	epoxide	
Glycolic Acid	iodine		
Hippuric Acid	iodine	epoxide	peroxide
Hippuric Acid	iodine		
Hippuric Acid	iodine		
Histidine	iodine		
Histidine	iodine		
Histidine			
Hydroquinone	iodine	epoxide	
Hydroquinone			
Imidazole	iodine		

TABLE II

Co-crystal Former	Co-crystal Former Functional Group	Interacting Group	amine	aromatic_s	Sp2 amine	sulfoxide	chlorate
Ipriflavone	Ether	aromatic-N amide	thiol	amide	amine	aniline	phenol
Ipriflavone	Ketone	alcohol	thiol	amide	amine	aniline	phenol
Isoleucine	Amine	alcohol	thiol	amide	amine	aniline	phenol
Isoleucine	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
lactobionic acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Lactobionic acid	alcohol	alcohol	thiol	amide	amine	aniline	phenol
Lactobionic acid	Ether	aromatic-N amide	amine	aromatic_s	Sp2 amine	sulfoxide	chlorate
Lauric acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Leucine	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Leucine	Amine	alcohol	thiol	amide	amine	aniline	phenol
Lysine	Amine	alcohol	thiol	amide	amine	aniline	phenol
Lysine	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Maleic	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Malic Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Malic Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Malonic	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Mandelic Acid	Alcohol	alcohol	thiol	amide	amine	aniline	phenol
Mandelic Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Methionine	Amine	alcohol	thiol	amide	amine	aniline	phenol
Methionine	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Methionine	Thioether	-N amide	amine	_s	Sp2 amine	aniline	phenol
Nicotinamide	Pyridine	*alcohol	*	*amide	nitro	*amine	*Carboxylic Acid
Nicotinamide	Amide	alcohol	thiol	amide	amine	aniline	phenol
Nicotinic Acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Nicotinic Acid	Pyridine	*alcohol	*	*amide	nitro	*amine	*Carboxylic Acid
Orotic acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Orotic acid	Lactam	alcohol	thiol	amide	amine	aniline	phenol
Oxalic acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Palmitic acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Pamoic acid	Carboxylic Acid	alcohol	thiol	amide	amine	aniline	phenol
Pamoic acid	alcohol	alcohol	thiol	amide	amine	aniline	phenol
Pamoic acid	Phenol	amine	sulfoxide	n	pyridine	cyano	aldehyde

TABLE II

Co-crystal Former	chlorine	sulfate	cyano	ester	amine	nitro	nitrate	bromine
ipriflavone	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
ipriflavone	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
isoleucine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
isoleucine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
lactobionic acid	phosphate	sulfate	sulfone	nitrate	pyridine	carboxylic acid	metals	aldehyde
Lactobionic acid	chlorine		cyano	ester	amine	nitro	nitrate	bromine
Lauric acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	
Leucine	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Leucine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Lysine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Lysine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Maleic	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Malic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Malic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Malonic	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Mandelic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Mandelic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Methionine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Methionine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Methionine	chlorine		cyano	ester	amine	nitro	nitrate	bromine
Nicotinamide	*sulfonamide	*ketone	ether	triazole	pyridine	ammonium	oxime	*chlorine
Nicotinamide	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Nicotinic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Nicotinic Acid	*sulfonamide	*ketone	ether	triazole		ammonium	oxime	*chlorine
Orotic acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Orotic acid	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	
Oxalic acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	
Palmitic acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	
Pamoic acid	phosphate	sulfate	sulfone	nitrate	pyridine	carboxylic acid	carboxylic acid	aldehyde
Pamoic acid	phosphate	sulfate	sulfone	nitrate	pyridine	n-oxide	metals	fluorine
Pamoic acid	alcohol		sulfone	ester	ether		chlorine	

TABLE II

Co-crystal Former	aldehyde	ketone	peroxide	epoxide	furane	furane	heterocyclic-S	iodine
Ipriflavone	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Ipriflavone	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Isoleucine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Isoleucine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Lactobionic acid	ester	ether	cyano			bromine	chlorine	s-heterocyclic
Lactobionic acid	aldehyde	ketone	peroxide	epoxide			heterocyclic-S	iodine
Lactobionic acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Lauric acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Leucine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Leucine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Lysine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Lysine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Maleic	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Malic Acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Malic Acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Malonic	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Mandelic Acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Mandelic Acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Methionine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Methionine	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Methionine	aldehyde	ketone	peroxide	epoxide	Ag	Se	heterocyclic-S	iodine
Nicotinamide		thiol	ring	thionedisulfide	pyrrolidindione	iodine	hydrazone	thiocyanate
Nicotinamide	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Nicotinic Acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Nicotinic Acid		thiol	ring	thionedisulfide	pyrrolidindione	iodine	hydrazone	thiocyanate
Orotic acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Orotic acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Oxalic acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Palmitic acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Pantoic acid	aldehyde	ester	ether	cyano		furane	bromine	chlorine
Pantoic acid	ester	ether	ether	cyano		bromine	chlorine	s-heterocyclic
Pantoic acid	bromine	iodine	ketone	sulfonic acid	furane	phosphate	phosphonic acid	carboxylic acid



TABLE II

Co-crystal Former	ester	ether	carboxylic acid	sulfate	sulfone	phosphate ester	alcohol
Ipriflavone	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Ipriflavone	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Isoleucine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Isoleucine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Lactobionic acid	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	phosphate ester	alcohol
Lactobionic acid	ester	ether	carboxylic acid	sulfate	sulfone	phosphate ester	alcohol
Lauric acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Leucine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Leucine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Lysine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Lysine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Maleic	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Malic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Malic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Malonic	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Mandelic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Mandelic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Methionine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Methionine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol
Methionine	ester	ether	carboxylic acid	sulfate	sulfone	phosphate ester	alcohol
Nicotinamide	*bromine		hydroxamic acid	cyano	carboxamide	*sulfonic acid	*phosphoric acid
Nicotinamide	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Nicotinic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Nicotinic Acid							
Nicotinic Acid	*bromine		hydroxamic acid	cyano	carboxamide	*sulfonic acid	*phosphoric acid
Orotic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Orotic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Oxalic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Palmitic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Pantoic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Pantoic acid	pyridine	cyano	n-heterocyclic	n-heterocyclic	ketone	phosphate ester	*phosphoric acid
Pantoic acid	nitro	sulfone	aniline	ketone	phosphate ester	phosphate ester	alcohol

TABLE II

Co-crystal Former	fluorine	phosphate	cyanamide	BF4	acetate	thione	N-SO2	thiourea
Ipriflavone	fluorine	phosphate	cyanamide	BF4	fluorine	thione	dithiadiazocyclopentadienyl	thiourea
Ipriflavone	fluorine	carbamate	imidazole	BF4	BF4		N-SO2	thiourea
Isoleucine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Isoleucine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Lactobionic acid	carbamate	imidazole	BF4				N-SO2	thiourea
Lactobionic acid	fluorine	phosphate	cyanamide	BF4			N-SO2	thiourea
Lauric acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Leucine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Leucine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Lysine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Lysine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Maleic	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Malic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Malic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Malonic	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Mandelic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Mandelic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Methionine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Methionine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Methionine	fluorine	phosphate	imidazole	BF4			N-SO2	thiourea
Nicotinamide	N-oxide	ester	ether	fluorine	acetate	thione	dithiadiazocyclopentadienyl	thiourea
Nicotinamide	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Nicotinic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Nicotinic Acid	N-oxide	ester	ether	fluorine	acetate	thione	dithiadiazocyclopentadienyl	thiourea
Orotic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Orotic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Oxalic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Palmitic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Pamoic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Pamoic acid	carbamate	imidazole	BF4				N-SO2	thiourea
Pamoic acid								

TABLE II

Co-crystal Former	iodine	epoxide	peroxide
Ipriflavone	iodine		
Ipriflavone	iodine		
Isoleucine	iodine		
Isoleucine	iodine		
Lactobionic acid	iodine		
Lactobionic acid	iodine		
Lactobionic acid	iodine		
Lauric acid	iodine		
Leucine	iodine		
Leucine	iodine		
Lysine	iodine		
Lysine	iodine		
Maleic	iodine		
Malic Acid	iodine	epoxide	
Malic Acid	iodine		
Malonic	iodine		
Mandelic Acid	iodine	epoxide	
Mandelic Acid	iodine		
Methionine	iodine		
Methionine	iodine		
Methionine	iodine		
Nicotinamide	iodine	epoxide	peroxide
Nicotinamide	iodine		
Nicotinic Acid	iodine		
Nicotinic Acid	iodine		
Orotic acid	iodine		
Orotic acid	iodine		
Oxalic acid	iodine		
Palmitic acid	iodine		
Pamoic acid	iodine		
Pamoic acid	iodine		
Pamoic acid	iodine		

TABLE II

Co-crystal Former	Co-crystal Former Functional Group	Interacting Group	thiol	amide	amine	aniline	phenol
Phenylalanine	Amine	alcohol	ketone	thiol	amine	aniline	phenol
Phenylalanine	Carboxylic Acid	alcohol	ketone	thiol	amine	aniline	phenol
Piperazine	Amine	alcohol	ketone	thiol	amine	aniline	phenol
Procaine	Amine	alcohol	ketone	thiol	amine	aniline	phenol
Proline	Ketone	alcohol	ketone	thiol	amine	aniline	phenol
Proline	Carboxylic Acid	alcohol	ketone	thiol	amine	aniline	phenol
Proline	Amine	alcohol	ketone	thiol	amine	aniline	phenol
p-Toluenesulfonic acid	Sulfonic Acid	pyridine	ketone	aldehyde	ester	amide	Carboxylic Acid
Pyridoxamine	Alcohol	alcohol	ketone	thiol	amine	aniline	phenol
Pyridoxamine	Amine	alcohol	ketone	thiol	amine	aniline	phenol
Pyridoxamine	Pyridine	*alcohol	*	*amide	nitro	*amine	*Carboxylic Acid
Pyridoxamine	Pyridine	*alcohol	pyridinium	*amide	nitro	*amine	*Carboxylic Acid
Pyridoxamine	Alcohol	alcohol	ketone	thiol	amine	aniline	phenol
Pyridoxamine	Carboxylic Acid	alcohol	ketone	thiol	amine	aniline	phenol
Pyroglutamic acid	Lactam	alcohol	ketone	thiol	amine	aniline	phenol
Pyroglutamic acid	Ketone	alcohol	ketone	thiol	amine	aniline	phenol
Quercetin	Phenol	amine	amide	sulfoxide	pyridine	cyano	aldehyde
Quercetin	Ether	aromatic-N	amide	aromatic_s	Sp2 amine	sulfoxide	chlorate
Quercetin	Ketone	alcohol	amide	amide	amine	aniline	phenol
Resveratrol	Phenol	amine	amide	sulfoxide	pyridine	cyano	aldehyde
Resveratrol	Amide	alcohol	ketone	thiol	amine	aniline	phenol
Saccharin	Ketone	alcohol	ketone	thiol	amine	aniline	phenol
Saccharin	Sulfoxide	pyridine	ketone	aldehyde	ester	amide	Carboxylic Acid
Saccharin	Amine	alcohol	ketone	thiol	amine	aniline	phenol
Salicylic Acid	Carboxylic Acid	alcohol	ketone	thiol	amine	aniline	phenol
Salicylic Acid	Alcohol	alcohol	ketone	thiol	amine	aniline	phenol
Salicylic Acid, 4-amino	Carboxylic Acid	alcohol	ketone	thiol	amine	aniline	phenol
Salicylic Acid, 4-amino	alcohol	alcohol	ketone	thiol	amine	aniline	phenol
Salicylic Acid, 4-amino	Amine	alcohol	ketone	thiol	amine	aniline	phenol

## TABLE II

[illegible]



## TABLE II

[illegible]

TABLE II

Co-crystal Former	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Phenylalanine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Phenylalanine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Piperazine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Procaine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Procaine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Proline	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Proline	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
p-Toluenesulfonic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Pyridoxamine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Pyridoxine	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
(4-Pyridoxic Acid)	*bromine	pyridine	hydroxamic acid	cyano	carboxamide	*sulfonic acid
Pyridoxine	*bromine	pyridine	hydroxamic acid	cyano	carboxamide	*sulfonic acid
(4-Pyridoxic Acid)	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Pyroglutamic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Pyroglutamic acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Quercetin	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Quercetin	nitro	sulfone	aniline	n-heterocyclic	ketone	phosphate ester
Quercetin	ester	ether	carboxylic acid	sulfate	sulfone	alcohol
Resveratrol	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Resveratrol	nitro	sulfone	aniline	n-heterocyclic	ketone	phosphate ester
Saccharin	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Saccharin	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Saccharin	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Saccharin	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Salicylic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Salicylic Acid	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Salicylic Acid, 4-amino	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester
Salicylic Acid, 4-amino	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine
Salicylic Acid, 4-amino	s-heterocyclic	pyridine	cyano	n-heterocyclic	ketone	phosphate ester

TABLE II

Co-crystal Former	fluorine	carbamate	imidazole	BF4	acetate	thione	N-SO2	thiourea
Phenylalanine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Phenylalanine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Piperazine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Procaine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Procaine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Proline	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Proline	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
p-Toluenesulfonic acid								
Pyridoxamine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Pyridoxamine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Pyridoxamine	N-oxide	ester	ether	fluorine	acetate	thione	dithiadiazocyclopentadienyl	
Pyridoxamine	N-oxide	ester	ether	fluorine	acetate	thione	dithiadiazocyclopentadienyl	
(4-Pyridoxic Acid)								
Pyridoxine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
(4-Pyridoxic Acid)	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Pyroglutamic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Pyroglutamic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Quercetin								
Quercetin								
Quercetin								
Resveratrol	fluorine	phosphate	cyanamide	BF4			N-SO2	thiourea
Resveratrol		carbamate	imidazole					
Saccharin	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Saccharin	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Saccharin								
Salicylic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Salicylic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Salicylic Acid, 4-amino	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Salicylic Acid, 4-amino	carbamate	imidazole	BF4					
Salicylic Acid, 4-amino	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea



TABLE II

Co-crystal Former	Co-crystal Former Functional Group	Interacting Group	thiol	amide	amine	aniline	phenol
Sebacic acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Serine	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Serine	Amine	alcohol	ketone	thiol	amide	amine	aniline
Serine	Alcohol	alcohol	ketone	thiol	amide	amine	aniline
Stearic acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Succinic Acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Tartaric Acid	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Threonine	Amine	alcohol	ketone	thiol	amide	amine	aniline
Threonine	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Threonine	alcohol	alcohol	ketone	thiol	amide	amine	aniline
Tris	Amine	alcohol	ketone	thiol	amide	amine	aniline
Tris	Alcohol	alcohol	ketone	thiol	amide	amine	aniline
Tryptophan	Amine	alcohol	ketone	thiol	amide	amine	aniline
Tryptophan	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Tryptophan	Indole	*alcohol	pyridinium	*	*amide	nitro	*amine
Tyrosine	Amine	alcohol	ketone	thiol	amide	amine	aniline
Tyrosine	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Tyrosine	Alcohol	alcohol	ketone	thiol	amide	amine	aniline
Urea	Ketone	alcohol	ketone	thiol	amide	amine	aniline
Urea	Amine	alcohol	ketone	thiol	amide	amine	aniline
Urea	Amide	alcohol	ketone	thiol	amide	amine	aniline
Valine	Amine	alcohol	ketone	thiol	amide	amine	aniline
Valine	Carboxylic Acid	alcohol	ketone	thiol	amide	amine	aniline
Vitamin K5	Amine	alcohol	ketone	thiol	amide	amine	aniline
Vitamin K5	Alcohol	alcohol	ketone	thiol	amide	amine	aniline
Xylitol	Alcohol	alcohol	ketone	thiol	amide	amine	aniline
							*carboxylic acid



TABLE II

Co-crystal Former	phosphate	sulfate	sulfone	nitrate	pyridine	ammonium	carboxylic acid	metals
Sebacic acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Serine	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Serine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Serine	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Stearic acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Succinic Acid	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Tartaric Acid	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Threonine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Threonine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Threonine	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Tris	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Tris	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Tryptophan	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Tryptophan	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Tryptophan	*sulfonamide	*ketone	ether	triazole		ammonium	oxime	*chlorine
Tyrosine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Tyrosine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Tyrosine	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Urea	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Urea	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Urea	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Valine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Valine	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Vitamin K5	phosphate	sulfate	sulfone	nitrate	pyridine		carboxylic acid	metals
Vitamin K5	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals
Xylitol	phosphate	sulfate	sulfone	nitrate	pyridine		Carboxylic Acid	metals

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## TABLE II

[illegible]

## TABLE II

<b>Co-crystal Former</b>	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Sebacic acid	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Serine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Serine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Serine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Stearic acid	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Succinic Acid	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tartaric Acid	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Threonine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Threonine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Threonine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tris	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tris	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tryptophan	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tryptophan	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tryptophan	*bromine		hydroxamic acid	ciano	carboxamide	*sulfonic acid
Tyrosine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tyrosine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Tyrosine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Urea	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Urea	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Urea	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Valine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Valine	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Vitamin K5	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Vitamin K5	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester
Xylitol	s-heterocyclic	pyridine	ciano	n-heterocyclic	ketone	phosphate ester

TABLE II

Co-crystal Former	fluorine	carbamate	imidazole	BF4	acetate	thione	N-SO2	thiourea
Sebacic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Serine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Serine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Serine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Stearic acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Succinic Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tartaric Acid	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Threonine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Threonine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Threonine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tris	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tris	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tryptophan	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tryptophan	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tryptophan	N-oxide	ester	ether	fluorine	acetate	thione	dithiadiazocyclopentadienyl	thiourea
Tyrosine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tyrosine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Tyrosine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Urea	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Urea	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Urea	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Valine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Valine	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Vitamin K5	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Vitamin K5	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea
Xylitol	fluorine	carbamate	imidazole	BF4			N-SO2	thiourea

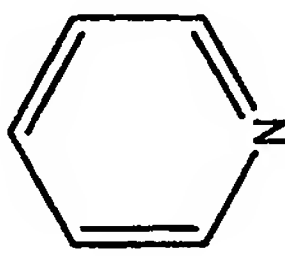
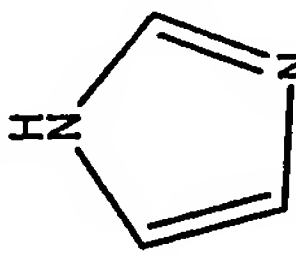
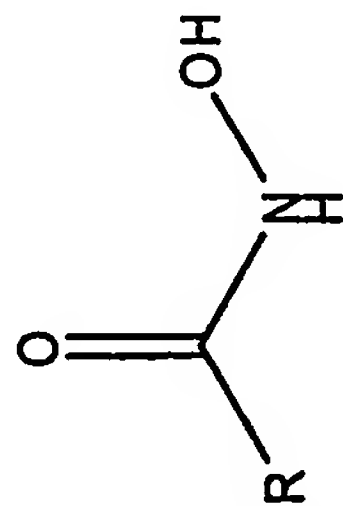

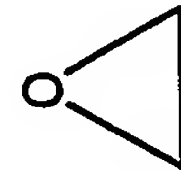
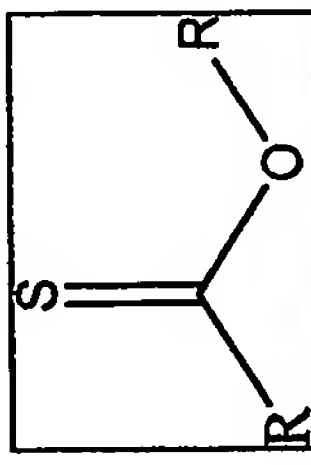
TABLE II

Co-crystal Former	iodine	epoxide	iodine	peroxide
Sebacic acid	iodine			
Serine	iodine			
Serine	iodine			
Serine	iodine	epoxide		
Stearic acid	iodine			
Succinic Acid	iodine			
Tartaric Acid	iodine			
Threonine	iodine			
Threonine	iodine			
Threonine	iodine	epoxide		
Tris	iodine			
Tris	iodine	epoxide		
Tryptophan	iodine			
Tryptophan	iodine			
Tryptophan	iodine			
Tyrosine	iodine			
Tyrosine	iodine			
Tyrosine	iodine	epoxide		
Urea	iodine			
Urea	iodine			
Urea	iodine			
Valine	iodine	epoxide	peroxide	
Valine	iodine			
Vitamin K5	iodine			
Vitamin K5	iodine	epoxide		
Xylitol	iodine	epoxide		

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TABLE III

Functional Group	Functional Group Structure	Interacting Group						
pyridine		*alcohol	pyridinium	*amide	nitro	*amine	*carboxylic acid	
imidazole		imidazole	chlorine	acetamide	carboxylate	thione	nitro	
Hydroxamic acid		hydroxamic acid	alcohol	phosphinic ester	alkane	pyridine	amide	
peroxide		ester	peroxide	amide	ether	alkane	N-heterocycle	
epoxide		alkane	bromine	alcohol	ester	epoxide	amide	
thioester		aromatic	thioester	alkane	sulfamide	hydroxy	bromine	

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TABLE III

Functional Group	*sulfonamide	*ketone	ether	triazole	alkane	ammonium	oxime	*chlorine	alkyne
pyridine									
imidazole	cyanamide	ketone	cyano	carboxylic acid	alcohol	alkane	thiol	amine	phosphinic acid hemihydrate
Hydroxamic acid	sulfonamide	carboxylate	phosphine	amine	aromatic				
peroxide	aromatic	alcohol	pyrimidinedione	aniline	thiazole	peroxy acid	ketone	carboxylic acid	azide
epoxide	alkene	hydrazone	aromatic	thioether	ketone	aldehyde	chlorine	carboxylic acid	alkyne
thioester	iodine	amine	cyano	thioketone	amide		chlorine	nitro	

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TABLE III

Functional Group	thiol	n-heterocyclic ring	thionedisulfide	pyrrolidindione	iodine	hydrazone	thiocyanate	*bromine	aromatic
pyridine									
imidazole	chlorine	sulfonyl	sulfoxide	amide	fluorine	sulfonate ester			
Hydroxamic acid									
peroxide	phosphine oxide	sulfonamide	aniline						
epoxide		ammonium	fluorine	nitro	amine	cyano			
thioester									

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TABLE III

Functional Group	hydroxamic acid	cyano	carboxamide	*sulfonic acid	*phosphoric acid	N-oxide	ester	ether	fluorine	acetate	thione
pyridine											
imidazole											
Hydroxamic acid											
peroxide											
epoxide											
thioester											

TABLE III

Functional Group						
pyridine	dithiadiazocyclopentadienyl					
imidazole						
Hydroxamic acid						
peroxide						
epoxide						
thioester						



TABLE III

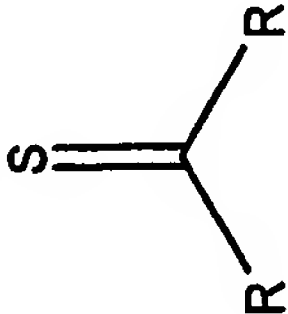

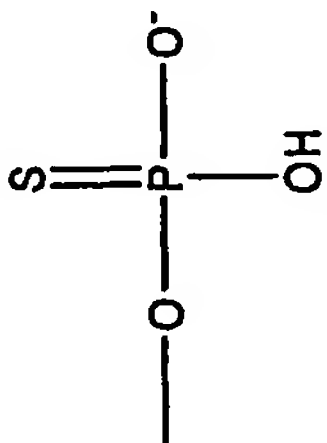
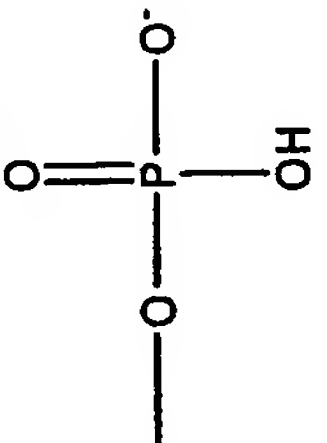
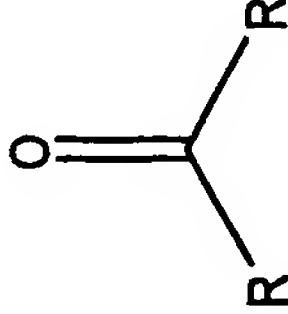
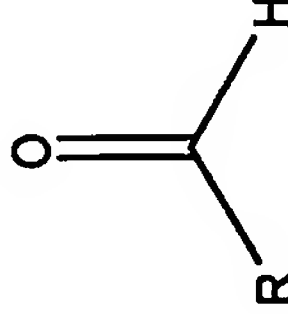

Functional Group	Functional Group Structure	Interacting Group						
thioketone		alkane	thioketone	ketone	SULFAMIDE	AMINE	thiol	
nitrate ester		aromatic	amide	alkane	chlorine	nitrate ester	bromine	
Thiophosphate ester-O		amine	imidazole	cyclic amide				
Phosphate ester		aromatic	alcohol	phosphate ester	aromatic N-ring	pyridine	aniline	
Ketone		alcohol	ketone	thiol	amide	amine	aniline	
Aldehyde		alcohol	ketone	thiol	amide	amine	aniline	
Thiol		carboxylic acid	sodium	aldehyde	ketone	aromatic-N	cadmium	

TABLE III

Functional Group	sulfoxide	oxo	chlorine	bromine	AROMATIC	alkene	sulfone	iodine	AZOXY
thioketone									
nitrate ester	alcohol	ether	acetate						
Thiophosphate ester-O									
Phosphate ester	amine		sodium	potassium	lithium	carboxylic acid	amide	alkane	
Ketone	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals
Aldehyde	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals
Thiol	alkane	arsenic	chlorine	alcohol	potassium	Ru	aromatic	Rb	Sb

TABLE III

Functional Group	potassium	epoxide	n-oxide		cyano	iron	cobalt	amine	sulfate		
thioketone											
nitrate ester											
Thiophosphate ester-O											
Phosphate ester											
Ketone	aldehyde	ester	ether		cyano		furan	bromine	chlorine	s-heterocyclic	
Aldehyde	aldehyde	ester	ether		cyano		furan	bromine	chlorine	s-heterocyclic	
Thiol											

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TABLE III

Functional Group	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine	carbamate	imidazole	BF4	alkane
thioketone										
nitrate ester										
Thiophosphate ester-O										
Phosphate ester										
Ketone										
Aldehyde										
Thiol										

TABLE III

Functional Group						
thio ketone						
nitrate ester						
Thiophosphate ester-O						
Phosphate ester						
Ketone	aromatic	N-SO <sub>2</sub>	thiourea	iodine		
Aldehyde	aromatic	N-SO <sub>2</sub>	thiourea	iodine	epoxide	
Thiol						

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TABLE III

Functional Group	Functional Group Structure	Interacting Group							
Alcohol	$R-OH$	alcohol	ketone	thiol	amide	amine	amine	aniline	
Thioether	$R-S-R$	aromatic-N	amide	amine	aromatic_s	Sp2 amine	sulfoxide		
Ether	$R-O-R$	aromatic-N	amide	amine	aromatic_s	Sp2 amine	sulfoxide		
Cyanamide	$N-C\equiv N$	cyano	amine	potassium	aromatic-N	bromine	sodium		
Thiocyanate	$S-C\equiv N$	aromatic-S	ester	ether					
sP2 amine	$R_2C=NH$	thioether	ether	metals	MoOCl4	BF4	bromine		
Amine primary	$R-NH_2$	alcohol	ketone	thiol	amide	amine	aniline		

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TABLE III

Functional Group	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals
Alcohol									
Thioether	chlorate	chlorine	alkyne	cyano	ester	amine	nitro	nitrate	bromine
Ether	chlorate	chlorine	alkyne	cyano	ester	amine	nitro	nitrate	bromine
Cyanamide	imidazole	ether	n-heterocyclic	alcohol	cesium	Ag			
Thiocyanate									
sP2 amine	chlorine		Sp2 amine	sulfate	Osmium				
Amine primary	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals

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TABLE III

Functional Group	aldehyde	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
Alcohol									
Thioether	aldehyde	ketone	peroxide	epoxide	Ag	Se	heterocyclic-S	iodine	ester
Ether	aldehyde	ketone	peroxide	epoxide	Ag	Se	heterocyclic-S	iodine	ester
Cyanamide									
Thiocyanate									
sP2 amine									
Amine primary	aldehyde	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic

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TABLE III

Functional Group	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	alcohol	fluorine	carbamate	imidazole	BF4	alkane
Alcohol											
Thioether	ether	carboxylic acid	sulfate	sulfone	alkane	alcohol		phosphate			
Ether	ether	carboxylic acid	sulfate	sulfone	alkane	alcohol		phosphate	cyanamide		
Cyanamide											
Thiocyanate											
sP2 amine											
Amine primary	pyridine	cyano	n-heterocyclic	ketone	phosphate ester		fluorine	carbamate	imidazole	BF4	alkane

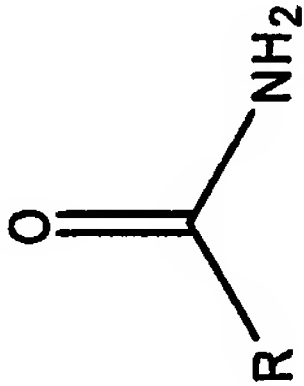
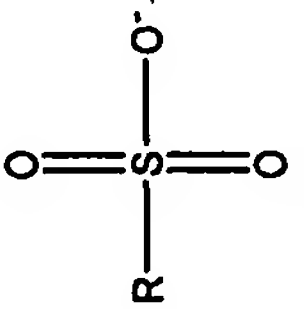
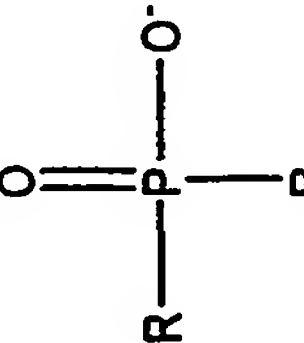
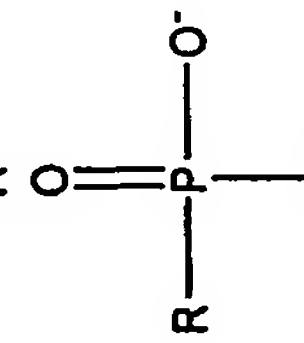
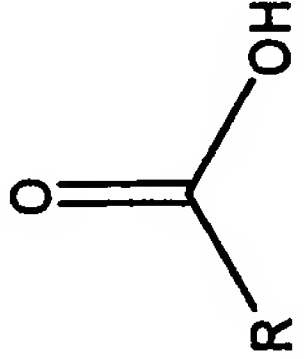
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TABLE III

Functional Group	aromatic	N-SO <sub>2</sub>	thiourea	iodine	epoxide
Alcohol					
Thioether					
Ether					
Cyanamide					
Thiocyanate					
sp <sup>2</sup> amine					
Amine primary	aromatic	N-SO <sub>2</sub>	thiourea	iodine	

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TABLE III

Functional Group	Functional Group Structure	Interacting Group						
Amine secondary	$R_2-NH$	alcohol	ketone	thiol	amide	amine	aniline	
Amine tertiary	$R_3-N$	alcohol	ketone	thiol	amide	amine	aniline	
Amide		alcohol	ketone	thiol	amide	amine	aniline	
Sulfonic acid		pyridine	ketone	aldehyde	ether	ester	amide	
Phosphinic acid		alkane	potassium	lithium	n-heterocyclic	oxime	amide	
Phosphonic acid		alkane	potassium	lithium	n-heterocyclic	oxime	amide	
Carboxylic acid		alcohol	ketone	thiol	amide	amine	aniline	

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TABLE III

Functional Group	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals
Amine secondary	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals
Amine tertiary	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals
Amide	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals
Sulfonic acid	carboxylic acid	amine	metals	thioether		sulfate	alcohol		
Phosphinic acid	phenol	aromatic	amine	alcohol		metals			
Phosphonic acid	phenol	aromatic	amine	alcohol		metals	carboxylic acid	Sp2 amine	aniline
Carboxylic acid	phenol	phosphate	sulfate	sulfone	nitrate	pyridine	aromatic	carboxylic acid	metals

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TABLE III

Functional Group	aldehyde	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
Amine secondary	aldehyde	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
Amine tertiary	aldehyde	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
Amide	aldehyde	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic
Sulfonic acid									
Phosphonic acid									
Phosphonic acid	ether	phosphonic acid	aromatic-N	ketone	aldehyde	imidazole			
Carboxylic acid	aldehyde	ester	ether	cyano		furan	bromine	chlorine	s-heterocyclic

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TABLE III

Functional Group	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine	carbamate	imidazole	BF4	alkane
Amine secondary	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine	carbamate	imidazole	BF4	alkane
Amine tertiary	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine	carbamate	imidazole	BF4	alkane
Amide	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine	carbamate	imidazole	BF4	alkane
Sulfonic acid										
Phosphinic acid										
Phosphonic acid										
Carboxylic acid	pyridine	cyano	n-heterocyclic	ketone	phosphate ester	fluorine	carbamate	imidazole	BF4	alkane

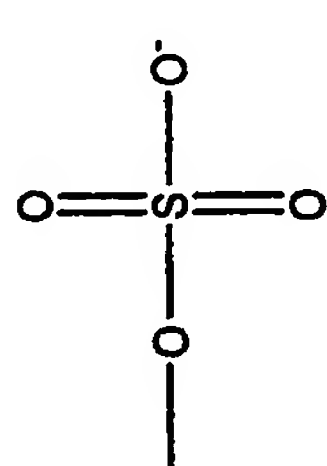
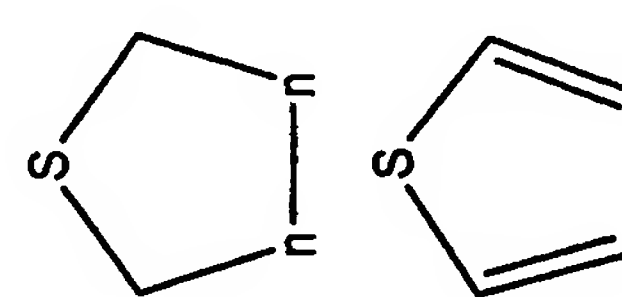
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TABLE III

Functional Group						
Amine secondary	aromatic	N-SO <sub>2</sub>	thiourea	iodine		
Amine tertiary	aromatic	N-SO <sub>2</sub>	thiourea	iodine		
Amide	aromatic	N-SO <sub>2</sub>	thiourea	iodine	epoxide	peroxide
Sulfonic acid						
Phosphinic acid						
Phosphonic acid						
Carboxylic acid	aromatic	N-SO <sub>2</sub>	thiourea	iodine		

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TABLE III

Functional Group	Functional Group Structure	Interacting Group						
Sulfate ester		pyridine	ketone	aldehyde	ether	ester	amide	
Oxime	$C=N-OH$	alcohol	alkane	amine	amide	ether	ester	
Nitrile	$-C\equiv N$	metal	ketone	phenol	alcohol		cyano	
Diazo	$RH_2C-N=N-CH_2R$	Oxime						
Nitro	$NO_2$	pyridine	ketone	aldehyde	ether	ester	amide	
S-heterocyclic ring		alcohol	thioketone	thioether	s-heterocyclic	ketone	aromatic	
Thiophene		chlorine	fluorine	amide	ketone	NO	SO	

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### TABLE III

[illegible]





### TABLE III

Functional Group	
Sulfate ester	
Oxime	
Nitrile	
Diazo	
Nitro	
S-heterocyclic ring	
Thiophene	

TABLE III

Functional Group							
Sulfate ester							
Oxime							
Nitrile							
Diazo							
Nitro							
S-heterocyclic ring							
Thiophene							

TABLE III

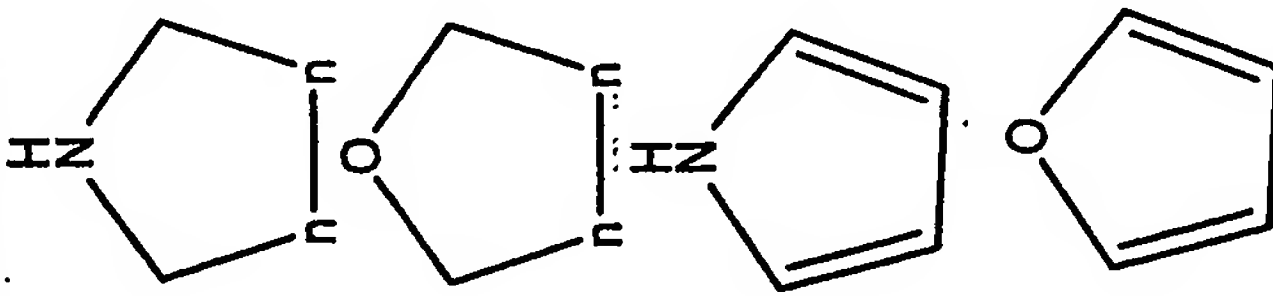
Functional Group	Functional Group Structure	Interacting Group					
N-heterocyclic ring		alcohol	thioketone	thioether	s-heterocyclic	ketone	aromatic
O-heterocyclic ring		alcohol	thioketone	thioether	s-heterocyclic	ketone	aromatic
Pyrrole		chlorine	fluorine	amide	ketone	NO	SO
Furan		s-heterocyclic					

TABLE III

Functional Group												
N-heterocyclic ring	alkene	amine	chlorine	BF <sub>4</sub>	sulfate	ester	NO	ether	amide			
O-heterocyclic ring	alkene	amine	chlorine	BF <sub>4</sub>	sulfate	ester	NO	ether	amide			
Pyrrole	CO	imidazole	pyridine	n-aromatic	aldehyde	carboxylic acid	sulfate	chlorine	bromine			
Furan												

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TABLE III

Functional Group										
N-heterocyclic ring	iodine	carboxylic acid	sodium	cyano	chloride	aldehyde				
O-heterocyclic ring	iodine	carboxylic acid	sodium	cyano	chloride	aldehyde				
Pyrrole	oxime	alcohol	phenol	ester	ether					
Furan										

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TABLE III

Functional Group					
N-heterocyclic ring					
O-heterocyclic ring					
Pyrrole					
Furan					

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
(-)-amlodipine	3,5-Pyridinedicarboxylic acid, 2-((2-aminoethoxy)methyl)-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl-5-methyl ester, (S)- [CAS]	103129-82-4	WO 9310779	Antihypertensive, other	Hypertension, general
(-)-halofenate	(-)-Benzenecacetic acid, 4-chloro-Alpha-[3-(trifluoromethyl)-phenoxy]-, 2-(acetylamino)ethyl ester		US 6262118	Antidiabetic	Diabetes, Type II
(R)-salbutamol	1,3-Benzenedimethanol, Alpha1-(((1,1-dimethylethyl)amino)methyl)-4-hydroxy- [CAS]			Formulation, modified-release, <=24hr	Asthma
(R)-salbutamol	1,3-Benzenedimethanol, Alpha1-(((1,1-dimethylethyl)amino)methyl)-4-hydroxy- [CAS]	34391-04-3	US 5547994	Antiasthma	Asthma
(R,R)-formoterol	Formamide, N-(2-hydroxy-5-(1-hydroxy-2-((2-(4-methoxyphenyl))-1-methylethyl)amino)ethyl)phenyl)- (R- (R*,R*))- [CAS]	67346-49-0	US 5795564	Antiasthma	Asthma
(S)-doxazosin	(S)-1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(1,4-benzodioxan-2-yl carbonyl)piperazine	70918-18-2	WO 9409785	Prostate disorders	Benign prostatic hyperplasia
(S)-fluoxetine	Benzenepropanamide, N-methyl-Gamma-(4-(trifluoromethyl)phenoxy)- (S)			Antimigraine	Migraine
(S)-oxybutynin	Benzenecacetic acid, Alpha-cyclohexyl-Alpha-hydroxy-, 4-(diethylamino)-2-butynyl ester, (S)- [CAS]	119618-22-3 524-42-5 68-96-2		Urological	Incontinence
1,2-Naphthoquinone 17α- Hydroxyprogesterone 17-Methyltestosterone	Platinum-195m, diamminedichloro, (SP-4-2)-	58-18-4			
195mPt-cisplatin 1α- Hydroxycholecalciferol		41294-56-8	US 6074626	Anticancer, alkylating	Cancer, liver

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
1-Naphthyl Salicylate		550-97-0			
1-Naphthylamine-4-sulfonic Acid		84-86-6			
1-Theobromineacetic Acid		5614-56-2			
2,4,6-Tribromo-m-cresol		4619-74-3			
2,6-Diamino-2'-butyloxy-3,5'-azopyridine		617-19-6			
21-Acetoxy pregnenolone		566-78-9			
2-Amino-4-picoline		695-34-1			
2-Aminothiazole		96-50-4			
2-ethoxybenzoic acid	2-Ethoxybenzoic acid		DE 5134001	Analgesic, NSAID	Pain, general
2-Naphthol		135-19-3			
2-Naphthyl Benzoate		93-44-7			
2-Naphthyl Lactate		93-43-6			
2-Naphthyl Salicylate		613-78-5			
2-p-Sulfanilylanilinoethanol		80-02-4			
2-Thiouracil		141-90-2			
3',3'',5',5''-Tetrabromophenolphthalein		76-62-0			
3-Amino-4-hydroxybutyric Acid		589-44-6			
3-Bromo-d-camphor		76-29-9			
3-Hydroxycamphor		10373-81-6			
3-O-Lauroylpyridoxol Diacetate		1562-13-6			
3-Pentadecylcatechol		492-89-7			

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
3-Quinuclidinol	Benzoic acid, 4-amino-2-hydroxy- [CAS]	1619-34-7		GI inflammatory/bowel disorders	Inflammatory bowel disease
4,4'-Oxydi-2-butanol		821-33-0			
4,4'-Sulfinyldianiline		119-59-5			
4-Amino-3-hydroxybutyric Acid		352-21-6			
4-Amino-3-phenylbutyric Acid		1078-21-3			
4-aminosalicylic acid	Pentanoic acid, 5-amino-4-oxo- [CAS]	65-49-6		Dermatological	Keratosis
4-Chloro-m-cresol		59-50-7			
4-Hexylresorcinol		136-77-6			
4-Salicyloylmorpholine		3202-84-4			
5'-Nitro-2'-propoxyacetanilide	1,3,5-Triazin-2(1H)-one, 4-amino-1-β-D-ribofuranosyl- [CAS]	553-20-8		Anticancer, antimetabolite	Myelodysplastic syndrome
5-aminolevulinic acid,		106-60-5			
5-azacitidine		320-67-2			
5-Bromosalicylhydroxamic Acid	2-(4-Amino-3-methylphenyl)-6-hydroxybenzothiazole	5798-94-7	US 6037360	Anticancer, other	Cancer, breast
5F-DF-203	2,4(1H,3H)-Pyrimidinedione, 5-fluoro [CAS]	51-21-8		Formulation, parenteral, targeted	Cancer, general
5-FU	N-[2-(2,2,2-Trifluoro-1-hydroxy-1-trifluoromethyl-ethyl)-naphthalen-1-yl] amide	54-25-1		Male sexual dysfunction	Premature ejaculation
5-HT3 antagonists		50-44-2		Urological	Overactive bladder
6-Azauridine		148-24-3			
6-Mercaptopurine		91421-43-1			
8-Hydroxyquinoline	N-[2-(2,2,2-Trifluoro-1-hydroxy-1-trifluoromethyl-ethyl)-naphthalen-1-yl] amide				
9-Aminocamptothecin					
A-151892					

Pat. 2500, 9772

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b><math>\alpha_1</math>-Antitrypsin</b>		9041-92-3			
A-5021	6H-Purin-6-one, 2-amino-9-(((1S,2R)-1,2-bis(hydroxymethyl)cyclopropyl)methyl)-1,9-dihydro- [CAS]	145512-85-2		Antiviral, other	Infection, varicella zoster virus
abacavir	2-Cyclopentene-1-methanol, 4-(2-amino-6-(cyclopropylamino)-9H-purin-9-yl)-, (1S-cis)- [CAS]	136470-78-5 188062-50-2	EP 434450	Antiviral, anti-HIV	Infection, HIV/AIDS
abaperidone	7-[3-[4-(6-Fluoro-1,2-benzisoxazol-3-yl)piperidin-1-yl]propoxy]-3-(hydroxymethyl)chromen-4-one	183849-43-6	WO 9632389	Neuroleptic	Schizophrenia
abarelix	D-Alaninamide, N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-N-methyl-L-tyrosyl-D-asparaginy-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl- [CAS]	183552-38-7 143653-53-6 111841-85-1	US 5843902	Anticancer, hormonal	Cancer, prostate
Abciximab					
Abecarnil					
abetimus		169147-32-4	US 5552391	Immunosuppressant	Lupus erythematosus, systemic
abiraterone	Androsta-5,16-dien-3-ol, 17-(3-pyridinyl)-, acetate (ester), (3 $\beta$ )- [CAS]	154229-18-2	GB 2265624	Anticancer, hormonal	Cancer, prostate
<b><math>\alpha</math>-Bisabolol</b>		515-69-5 1397-89-3			
ABLC	Amphotericin B [CAS]	30652-87-0		Formulation, conjugate, carbohydrate	Infection, Candida, general
ABT-751	Benzenesulfonamide, N-[2-[(4-hydroxyphenyl)amino]-3-pyridinyl]-4-methoxy- [CAS]	141430-65-1	EP 472053	Anticancer, other	Cancer, general
AC-5216	N-benzyl-N-ethyl-2-(7,8-dihydro-7-methyl-8-oxo-2-phenyl-9H-purin-9-yl)acetamide				
<b>Acadesine</b>		2627-69-2			
acamprostate	1-Propanesulfonic acid, 3-(acetylamino)- [CAS]	77337-76-9 77337-73-6	GB 2051789	Anxiolytic Dependence treatment	Anxiety, general Addiction, alcohol
<b>Acamprosate</b>					



Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<u>Acarbose</u>	7H-Purine-7-acetic acid, 1,2,3,6-tetrahydro-1,3-dimethyl-2,6-dioxo-, compd. with trans-4-[[[(2-amino-3,5-dibromophenyl)methyl]amino]cyclohexanol (1:1) [CAS]	56180-94-0			
<u>acebrophylline</u>		96989-76-3	DE 3425007	Antiasthma	Asthma
<u>acebutolol</u>	Butanamide, N-[3-acetyl-4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]phenyl]-, (+/-)- [CAS]	34381-68-5 37517-30-9	US 3726919	Antihypertensive, adrenergic	
<u>Acecainide</u>		32795-44-1			
<u>Acecarbromal</u>		77-66-7			
<u>aceclofenac</u>	Benzeneacetic acid, 2-[(2,6-dichlorophenyl)amino]-, carboxymethyl ester [CAS]	89796-99-6	EP 119932	Anti-inflammatory	Pain, musculoskeletal
<u>Acedapsone</u>		77-46-3			
<u>Acediasulfone</u>		80-03-5			
<u>Acefylline</u>		652-37-9			
<u>Aceglutamide</u>		2490-97-3			
<u>aceglutamide</u>	Aluminum, pentakis(N2-acetyl-L-glutaminato)tetrahydroxytri- [CAS]	12607-92-0	DE 2127176	Antiulcer	Ulcer, GI, general
<u>acemetacin</u>	1H-Indole-3-acetic acid, 1-(4-chlorobenzoyl)-5-methoxy-2-methyl-, carboxymethyl ester [CAS]	53164-05-9	US 3910952	Anti-inflammatory	
<u>Acenocoumarol</u>		152-72-7			
<u>Acetal</u>		105-57-7			
<u>Acetamidoeugenol</u>		305-13-5			
<u>Acetaminophen</u>		103-90-2			
<u>Acetaminosalol</u>		118-57-0			
<u>Acetanilide</u>		103-84-4			
<u>Acetarson</u>		97-44-9			
<u>Acetazolamide</u>		59-66-5			
<u>Acetiamine</u>		299-89-8			
<u>Acetohexamide</u>		968-81-0			
<u>Acetohydroxamic Acid</u>		546-88-3			
<u>Acetophenazine</u>		2751-68-0			

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Acetophenone	Olean-12-en-30-oic acid, 3β-hydroxy-11-oxo-acetate, aluminium salt [CAS]	98-86-2	US 3764618	Antiulcer	
Acetosulfone		128-12-1			
acetoxolone		29728-34-5			
Acetrizoate		6277-14-1			
Acetyl		129-63-5			
Sulfamethoxypyrazine		3590-05-4			
Acetylcarnitine		14992-62-2			
Acetylcholine		66-23-9			
Acetylcholine		60-31-1			
Acetylcysteine		616-91-1			
Acetylleucine		149-90-6			
Monoethanolamine		13402-08-9			
Acetylpheneturide		50-78-2			
acetylsalicylic acid		75-6			
α-Chloralose		15879-93-3			
acidovir	6H-Purin-6-one, 2-amino-1,9-dihydro-9-[(2-hydroxyethoxy)methyl]- [CAS]	59277-89-3	GB 1361967	Hypolipaeimic/Antiatherosclerosis	Infection, herpes simplex virus
Acifran		72420-38-3			
acipimox		51037-30-0			
acitazanolast		114607-46-4			
acitretin		55079-83-9			
aciarubicin	Acetic acid, oxo[[3-(1H-tetrazol-5-yl)phenyl]amino]- [CAS] 2,4,6,8-Nonatetraenoic acid, 9-(4-methoxy-2,3,6-trimethylphenyl)-3,7-dimethyl-, (all-E) [CAS]	57576-44-0	EP 256507	Ophthalmological	Conjunctivitis
Aclationium Napadisilate		75443-99-1			
Aconitine		55077-30-0			
Acranil®		302-27-2			
Acriflavine		1684-42-0			
Acrisorcin		8048-52-0	US 3988315	Anticancer, antibiotic	Psoriasis
		7527-91-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
acrivastine	2-Propenoic acid, 3-[6-[1-(4-methylphenyl)-3-(1-pyrrolidinyl)-1-propenyl]-2-pyridinyl]-, (E,E)- [CAS]	87848-99-5	EP 85959	Antipruritic/inflamm, allergic	Rhinitis, allergic, general
acrivastine + pseudoephedrine	Benzenemethanol, Alpha-[1-(methylamino)ethyl]-, hydrochloride, [S-(R*,R*)]-, mixt with 2-Propenoic acid, 3-[6-[1-(4-methylphenyl)-3-(1-pyrrolidinyl)-1-propenyl]-2-pyridinyl]-, (E,E)-	18699-02-0		Antiallergic, non-asthma	Rhinitis, allergic, seasonal
actagardine derivative	3,3-dimethyl-1-propylamide HCl monocarboxamide actagardine	9002-60-2		Peptide antibiotic	Infection, general
<b>Actarit</b>		59277-89-3			
<b>ACTH</b>					
<b>Acyclovir</b>					
adapalene	2-Naphthalenecarboxylic acid, 6-(4-methoxy-3-tricyclo[3.3.1.1 <sup>3,7</sup> ]dec-1-ylphenyl)- [CAS]	106685-40-9	EP 199636	Antiacne	Acne
ADCON-L	GL 402 [CAS]	137802-74-5		Formulation, other	Fibrosis, epidural
<b>Adefovir</b>		106941-25-7			
adefovir dipivoxil	Propanoic acid, 2,2-dimethyl-, (((2-(6-amino-9H-purin-9-yl)ethoxy)methyl)phosphinylidene)bis(oxy)methylene)ester- [CAS]	142340-99-6	EP 205826	Antiviral, other	Infection, hepatitis-B virus
Adenoscan	6-Amino-9-β-D-ribofuranosyl-9H-purine [CAS]	58-61-7		Imaging agent	Diagnosis, coronary
<b>Adenosine Triphosphate</b>		56-65-5			
ADEPT		156079-88-8		Immunoconjugate, other	Cancer, colorectal
<b>Adinazolam</b>		37115-32-5			
<b>Adiphenine</b>		64-95-9			
ADL-10-0101			WO 9732857	Analgesic, other	Pain, general
<b>Adrafinil</b>		63547-13-7			
<b>Adrenalone</b>		99-45-6			
<b>Adrenochrome</b>		54-06-8			
adrogolide	Benzo(f)thieno(2,3-c)quinoline-9,10-diol, 4,5,5a,6,7,11b-hexahydro-2-propyl-, diacetate (ester), hydrochloride (5aR-trans)- [CAS]	166591-11-3	US 5597832	Dependence treatment	Addiction, cocaine
		171752-56-0			

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AEOL-10150 AET $\alpha$ -Ethylbenzyl Alcohol	Benzeneacetic acid, Alpha-methyl-4-(2-methylpropyl)-, 2-methoxyphenyl ester [CAS]	56-10-0 93-54-9	US 6103714	Neuroprotective	Unspecified
AF-2259 Afloqualone	1H-Indole-3-acetamide, 1-(2,2-diethoxyethyl)-2,3-dihydro-N-(4-methylphenyl)-3-((((4-methylphenyl)amino)carbonyl)amino)-2-oxo-, (3R)- [CAS]	66332-77-2 56287-74-2	DE 2726435	Anti-inflammatory	Inflammation, general
AG-041R	N-(5-[2-(2-amino-4(3H)-oxo-5,6,7,8-tetrahydropyrido[2,3-d]pyrimidin-6-yl)ethyl]-4-methylthieno-2-yl)glutamic acid	199800-49-2	WO 9419322	Alimentary/Metabolic, other	Unspecified
AG-2037 $\alpha$ -Glucose-1-phosphate		59-56-3		Anticancer, antimetabolite	Cancer, general
AGN-194310 agomelatine Ahistan AHL-157	Benzoic acid, 4-((4-(4-ethylphenyl)-2,2-dimethyl-2H-1-benzothiopyran-6-yl)ethynyl)- [CAS] Acetamide, N-(2-(7-methoxy-1-naphthalenyl)ethyl)- [CAS]	229961-45-9 138112-76-2 518-61-6	WO 9709297 EP 447285 US 5411972	Dermatological Antidepressant Hypolipaeamic/Antiatherosclerosis	Psoriasis Sleep disorder, general Atherosclerosis
AIT-034	9H-Purine-9-propanamide, 1,6-dihydro-6-oxo-N-(3-(2-oxo-1-pyrrolidiny)propyl)- [CAS] N-[2-(5-Hydroxy-1H-indol-3-yl)ethyl]-3-(6-oxo-6,9-dihydro-1H-purin-9-yl)propionamide	138117-48-3	US 5447939	Cognition enhancer	Dementia, senile, general
AIT-202			WO 9957120	Antidepressant	Unspecified

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AJ-9677	Acetic acid, ((3-((2R)-2-(((2R)-2-(3-chlorophenyl)-2-hydroxyethyl)amino)propyl)-1H-indol-7-yl)oxy)- [CAS]	244081-42-3		Antidiabetic	Diabetes, Type II
AJG-049		12/7/4360			
Ajmaline		74258-86-9	WO 9733885	Gastroprokinetic	Motility dysfunction, GI, general
Alacepril					
albaconazole	4(3H)-Quinazolinone, 7-chloro-3-[(1R,2R)-2-(2,4-difluorophenyl)-2-hydroxy-1-methyl-3-(1H-1,2,4-triazol-1-yl)propyl]- [CAS]	187949-02-6	WO 9705131	Antifungal	Infection, Candida, general
albendazole	Carbamic acid, [5-(propylthio)-1H-benzimidazol-2-yl]-, methyl ester [CAS]	54029-12-8 54965-21-8	GB 1464326	Anthelmintic	Infection, helminth, general
Albuterol		18559-94-9			
Albutoin		830-89-7			
alclofenac	Benzeneacetic acid, 3-chloro-4-(2-propenyloxy)- [CAS]	22131-79-9	GB 1174535	Anti-inflammatory	
alcometasone	Pregna-1,4-diene-3,20-dione, 7-chloro-11-hydroxy-16-methyl-17,21-bis(1-oxopropoxy)-, (7Alpha,11Beta,16Alpha)- [CAS]	66734-13-2 67452-97-5	US 4124707	Antipruritic/inflamm, allergic	Inflammation, dermal
Alcuronium		23214-96-2			
Aldioxa		5579-81-7			
Aldol		107-89-1			
Aldosterone		52-39-1			
alendronate	Phosphonic acid, (4-amino-1-hydroxybutylidene)bis-[CAS]	121268-17-5 129318-43-0	GB 2118042	Osteoporosis treatment	Osteoporosis
Alendronic Acid		66376-36-1			
Alexidine		22573-93-9			
alfacalcidol	9,10-Secocholesta-5,7,10(19)-triene-1,3-diol, (1Alpha,3Beta,5Z,7E)- [CAS]	41294-56-8		Osteoporosis treatment	Osteodystrophy
Alfadolone		23930-37-2			
Alfaxalone		23930-19-0			
Alfentanil		71195-58-9			
alfimeprase		259074-76-5		Fibrinolytic	Peripheral vascular disease

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alfuzosin	2-Furancarboxamide, N-[3-[(4-amino-6,7-dimethoxy-2-quinazolinyl)methylamino]propyl]tetrahydr	81403-68-1	GB 2013679	Prostate disorders	Benign prostatic hyperplasia
	o- [CAS]	81403-80-7			
alfuzosin	2-Furancarboxamide, N-[3-[(4-amino-6,7-dimethoxy-2-quinazolinyl)methylamino]propyl]tetrahydr	81403-68-1	GB 2013679	Formulation, modified-release, other	Benign prostatic hyperplasia
	o- [CAS]	81403-80-7			
Algestone		595-77-7			
Algestone Acetophenide		24356-94-3			
Alginate		9005-38-3			
Alglucerase		143003-46-7			
Alibendol		26750-81-2			
aliskiren	(2S,4S,5S,7S)-5-Amino-N-(2-carbamoyl-2-methylpropyl)-4-hydroxy-2-isopropyl-7-[4-methoxy-3-(3-methoxypropoxy)benzyl]-8-methylnonanamide	173334-57-1		Antihypertensive, renin system	Hypertension, general
alitretinoin	9-cis retinoic acid	3/8/5300		Antipruritic/inflamm, allergic	Eczema, general
alizapride	1H-Benzotriazole-5-carboxamide, 6-methoxy-N-[[1-(2-propenyl)-2-pyrrolidinyl]methyl]- [CAS]	59338-93-1	GB 1475234	Antiemetic	Nausea and vomiting, general
Alkannin		517-88-4			
Alkofanone		7527-94-8			
Allantoin		97-59-6			
Allobarbitol		52-43-7			
Allopurinol		315-30-0			
Allyl Isothiocyanate		57-06-7			
Allylestrenol		432-60-0			
almagate	Magnesium, [carbonato(2-))heptahydroxy(aluminum)tri-, dihydrate [CAS]	66827-12-1	US 4447417	Antacid/Antiflatulent	
		72526-11-5			
alminoprofen	Benzeneacetic acid, Alpha-methyl-4-[(2-methyl-2-propenyl)amino]- [CAS]	39718-89-3	US 3957850	Analgesic, NSAID	



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almitrine	1,3,5-Triazine-2,4-diamine, 6-[4-bis(4-fluorophenyl)methyl]-1-piperaziny]-N,N'-di-2-propenyl-, dimethanesulfonate [CAS]	27469-53-0 29608-49-9	GB 1256513	Respiratory	Bronchitis, chronic
almotriptan	Pyrrolidine, 1-(((3-(2-(dimethylamino)ethyl)-1H-indol-5-yl)methyl)sulfonyl)- [CAS]	154323-57-6 481-72-1 5133-19-7	WO 9402460	Antimigraine	Migraine
<b>Aloe-Emodin</b>					
<b>Aloin</b>					
alosetron	2,3,4,5-Tetrahydro-5-methyl-2-[(5-methyl-1H-imidazol-4-yl)methyl]-1H-pyrido[4,3-b]indol-1-one [CAS]	122852-42-0 122852-69-1 132414-02-9	EP 306323 EP 470355	GI inflammatory/bowel disorders Antiviral, anti-HIV	Irritable bowel syndrome Infection, HIV/AIDS
alovudine	Thymidine, 3'-deoxy-3'-fluoro- [CAS]	25526-93-6 9014-67-9			Emphysema, alpha-1 antitrypsin deficiency
<b>Aloxiprin</b>					
Alpha-1 protease inhibitor	Ergocryptine, 9,10-dihydro-methanesulfonate (salt)- [CAS]	29261-93-6 77-20-3 82626-01-5 81982-32-3	US 5780014	Formulation, inhalable, topical Formulation, other	Parkinson's disease
Alpha-dihydroergocryptine					
<b>Alphaprodine</b>					
<b>Alpidem</b>					
<b>Alpiropride</b>	4H-[1,2,4]Triazolo[4,3-a][1,4]benzodiazepine, 8-chloro-1-methyl-6-phenyl-[CAS]	28981-97-7 13655-52-2	US 3987052	Anxiolytic	Anxiety, general
alprazolam					
<b>Alprenolol</b>					
alsactide	Alpha1-17-Corticotropin, 1-β-alanine-17-[N-(4-aminobutyl)-L-lysineamide]- [CAS]	34765-96-3	US 3749704	ACTH	Arthritis, rheumatoid
ALT-711	Thiazolium, 4,5-dimethyl-3-(2-oxo-2-phenylethyl)-, bromide [CAS]	181069-80-7 5588-16-9	WO 9622095	Symptomatic antidiabetic	Hypertension, general
<b>Althiazide</b>					
altinidine	Pyridine, 3-ethynyl-5-((2S)-1-methyl-2-pyrrolidinyl)- [CAS]	179120-92-4	US 5594011	Antiparkinsonian	Parkinson's disease
altretamine	1,3,5-Triazine-2,4,6-triamine, N,N,N',N'',N'''-hexamethyl- [CAS]	645-05-6 7446-70-0 7784-13-6	US 3424752	Anticancer, alkylating Dermatological	Cancer, ovarian Hyperhidrosis
aluminium chloride hexahydrate	Aluminium chloride, hexahydrate				

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Aluminon	Aluminum hydroxide sulfate (Al7(OH)17(SO4)2), dodecahydrate [CAS]	569-58-4	DE 2510663	Urological	Hyperphosphataemia
Aluminum Acetate Solution		8006-13-1			
Aluminum Chlorate		15477-33-5			
Aluminum Hydroxychloride		1327-41-9			
Aluminum Potassium Sulfate		10043-67-1			
Aluminum Sodium Sulfate		10102-71-3			
alusulf		61115-28-4			
Alverine	Glycine, N-[(2S)-2-[[[(3R,4R)-4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]methyl]-1-oxo-3-phenylpropyl]-[CAS]	150-59-4	EP 657428	GI inflammatory/bowel disorders	Ileus
alvimopan		156053-89-3			
	4H-1-Benzopyran-4-one, 2-(2-chlorophenyl)-5,7-dihydroxy-8-(3-hydroxy-1-methyl-4-piperidinyl)-, cis-(-)- [CAS]	131740-09-5			
alvocidib		146426-40-6		Anticancer, other	Cancer, renal
ALX-0646			WO 9506638	Antimigraine	Migraine
AM-24	2,4,6-Triiodophenol	609-23-4		GI inflammatory/bowel disorders	Crohn's disease
	1-Piperazineethanol, 4-[[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]-Alpha-(4-chlorophenyl)- [CAS]	199467-52-2		Neuroprotective	Unspecified
AM-36	2-Methoxyoestradiol				
AM-477		768-94-5		Antiasthma	Asthma
Amantadine	1-Decanaminium, N,N-dimethyl-N-[2-[[[tricyclo[3.3.1.1 <sup>3,7</sup> ]dec-1-ylcarbonyl]oxy]ethyl]-, bromide [CAS]				
amantanium		58158-77-3	US 4288609	Antifungal	Infection, general
Ambazone		539-21-9			
Ambenonium		115-79-7			

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ambrisentan	(+)-(2S)-2-[(4,6-dimethylpyrimidin-2-yl)oxy]-3-methoxy-3,3-diphenylpropanoic acid	177036-94-1		Vasodilator, peripheral	Heart failure
ambroxol	Cyclohexanol, 4-[[[(2-amino-3,5-dibromophenyl)methyl]amino]-, trans- [CAS]	18683-91-5 23828-92-4	GB 1178034	COPD treatment	Bronchitis, chronic
Ambucaine		119-29-9			
Ambuphylline		5634-34-4			
Ambuside		3754-19-6			
Ambutonium Bromide		115-51-5			
amcinonide	Pregna-1,4-diene-3,20-dione, 21-(acetyloxy)-16,17-[cyclopentylidenebis(oxy)]-9-fluoro-11-hydroxy-, (11 $\beta$ ,16 $\alpha$ )- [CAS]	51022-69-6	DE 2437847	Antipsoriasis	
AMD-3100	1,4,8,11-Tetraazacyclotetradecane, 1,11-(1,4-phenylenebis(methylene))bis-, octahydrochloride [CAS]	155148-31-5 32887-01-7 32886-97-8	US 5612478	Haematological	Chemotherapy-induced injury, bone marrow, leucopenia
Amdinocillin					
Amdinocillin Pivoxil					
amdoxovir	1,3-Dioxolane-2-methanol, 4-(2,6-diamino-9H-purin-9-yl)- (2R-cis)- [CAS]	145514-04-1	EP 656778	Antiviral, anti-HIV	Infection, HIV/AIDS
amelubant	Carbamic acid, ((4-((3-((4-(1-(4-hydroxyphenyl)-1-methylethyl)phenoxy)methyl)phenyl)methoxy)phenyl)iminomethyl)- ethyl ester [CAS]	346735-24-8	DE 10000907	COPD treatment	Chronic obstructive pulmonary disease
Americaine	Benzenemethanaminium, N,N-dimethyl-N-[2-[2-[4-(1,1,3,3-tetramethylbutyl)phenoxy]ethoxy]ethyl]-, chloride, mixt. with ethyl 4-aminobenzoate [CAS]	129128-13-8 30578-37-1 51579-82-9 3354-67-4 3572-60-9		Formulation, inhalable, other	Pain, general
Amezinium					
Amfenac					
Amidephrine					
Amidinomycin					

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amifostine	Ethanethiol, 2-[(3-aminopropyl)amino]-, dihydrogen phosphate (ester)- [CAS]	20537-88-6 63717-27-1	EP 131500	Radio/chemoprotective	Chemotherapy-induced injury, renal
amiglumide	Pentanoic acid, 5-(dipentylamino)-4-((2-naphthalenylcarbonyl)amino)-5-oxo- (R)- [CAS]	119363-62-1 37517-28-5 39831-55-5	WO 8805774	GI inflammatory/bowel disorders Formulation, optimized, microencapsulate	Pancreatitis Infection, general
amineptine	Heptanoic acid, 7-[(10,11-dihydro-5H-dibenzof[a,d]cyclohepten-5-yl)amino]- [CAS]	30272-08-3 57574-09-1 140-40-9	US 3758528	Antidepressant	
<b>Aminitrozole</b> <i>Amino Acid Preparations</i> <i>Aminocaproic Acid</i>					
aminogluthethimide	2,6-Piperidinedione, 3-(4-aminophenyl)-3-ethyl- [CAS]	125-84-8 79-17-4	US 3944671	Anticancer, hormonal	Cancer, breast
<b>Aminoguanidine</b> <i>Aminohippurate</i>		642-44-4 60-46-8			
<b>Aminometradine</b> <b>Aminopentamide</b>	1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl-, compd. with 1,2-ethanediamine (2:1) [CAS]	317-34-0 58-37-7 58-15-1 3811-56-1 2207-50-3		Formulation, modified-release, other	Asthma
aminophylline					
<b>Aminopromazine</b> <b>Aminopyrine</b> <b>Aminoquinuride</b> <b>Aminorex</b>	Methanone, (2-butyl-3-benzofuranyl)[4-[2-(diethylamino)ethoxy]-3,5-diiodophenyl]- [CAS]	1951-25-3 19774-82-4 490-55-1 56824-20-5	US 3248401	Antiarrhythmic	Arrhythmia, general
amiodarone					
<b>Amiphenazole</b> <b>Amipriose</b>					

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amisulpride <b>Amitriptyline</b>	Benzamide, 4-amino-N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-(ethylsulfonyl)-2-methoxy- [CAS]	71675-85-9 50-48-6	US 4401822	Neuroleptic	Schizophrenia
amitriptyline+ketamine <b>Amitriptylinoxide</b>	1-Propanamine,3-(10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-ylidene)-N,N-dimethyl + cyclohexanone,2-(2-chlorophenyl)-2-(methylamino)	4317-14-0		Formulation, fixed-dose combinations	Pain, neuropathic
amlexanox	5H-[1]Benzopyrano[2,3-b]pyridine-3-carboxylic acid, 2-amino-7-(1-methylethyl)-5-oxo- [CAS]	68302-57-8	US 4299963	Antiasthma	Asthma
amlodipine <b>Ammoniacum</b> <b>Ammonium Benzoate</b> <b>Ammonium Mandelate</b> <b>Ammonium Salicylate</b> <b>Ammonium Valerate</b> <b>Amobarbital</b> <b>Amocarzine</b> <b>Amodiaquin</b>	3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester [CAS]	111470-99-6 88150-42-9 88150-47-4 3779000 1863-63-4 530-31-4 528-94-9 42739-38-8 57-43-2 36590-19-9 86-42-0	EP 89167	Antianginal	Hypertension, general
amorolfine <b>Amoscanate</b>	Morpholine, 4-[3-[4-(1,1-dimethylpropyl)phenyl]-2-methylpropyl]-2,6-dimethyl-, cis- [CAS]	78613-35-1 78613-38-4 26328-53-0	EP 24334	Antifungal	Infection, fungal, general
amosulalol <b>Amotriphene</b>	Benzenesulfonamide, 5-[1-hydroxy-2-[(2-methoxyphenoxy)ethyl]amino]ethyl]-2-methyl-, (+/-)- [CAS]	70958-86-0 85320-68-9 5585-64-8	EP 136103	Antihypertensive, adrenergic	Hypertension, general
amoxapine	Dibenz[b,f][1,4]oxazepine, 2-chloro-11-(1-piperazinyl)- [CAS]	14028-44-5	GB 1192812	Antidepressant	Depression, general

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amoxicillin	4-Thia-1-azobicyclo[3,2,0]heptane-2-carboxylic acid, 6-[[amino(4-hydroxyphenyl)acetyl]amino]-3,3-dimethyl-7-oxo-, [2S-[2Alpha,5Alpha,6Beta(S*)]] [CAS]	26787-78-0 61336-70-7		Formulation, modified-release, other	Infection, general Infection, respiratory tract, general
amoxicillin+potassium clavulan		74469-00-4	GB 1508977	Formulation, fixed-dose combinations	
AMPAlex	Piperidine, 1-(6-quinoxaliny(carbonyl))- [CAS]	154235-83-3 300-62-9 17590-01-1	US 5650409	Psychostimulant	Attention deficit disorder
Amphetamine Amphetaminil					
amphotericin B	Amphotericin B compd. with (3Beta)-cholest-5-en-3-yl hydrogen sulfate (1:1) [CAS]	120895-52-5 1397-89-3	US 4822777	Formulation, optimized, liposomes	Infection, general
ampicillin Ampiroxicam Ampligen	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[(aminophenylacetyl)amino]-3,3-dimethyl-7-oxo-, [2S-[2Alpha,5Alpha,6Beta(S*)]]	69-53-4 7177-48-2 99464-64-9 38640-92-5		Formulation, fixed-dose combinations	Infection, general
amprenavir	Carbamic acid, (3-(((4-aminophenyl)sulfonyl)(2-methylpropyl)amino)-2-hydroxy-1-(phenylmethyl)propyl)-, tetrahydro-3-furanyl ester, (3S-(3R*(1R*,2S*)))- [CAS]	161814-49-9 60719-84-8 75898-90-7	US 5783701 US 4004012	Antiviral, anti-HIV Cardio stimulant	Infection, HIV/AIDS
aminone	[3,4'-Bipyridin]-6(1H)-one, 5-amino- [CAS] 5,12-Naphthacenedione, 9-acetyl-9-amino-7-[(2-deoxy-beta-D-erythro-pentopyranosyl)oxy]-7,8,9,10-tetrahydro-6,11-dihydroxy-, hydrochloride, (7S-cis)- [CAS]				
amrubicin		92395-36-3	EP 107486	Anticancer, antibiotic	Cancer, lung, non-small cell
amsacrine	Methanesulfonamide, N-[4-(9-acridinylamino)-3-methoxyphenyl]- [CAS]	51264-14-3		Anticancer, other	Cancer, leukaemia, acute lymphocytic



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
antolmetin guacil	Glycine, N-[(1-methyl-5-(4-methylbenzoyl)-1H-pyrrol-2-yl)acetyl]-, 2-methoxyphenyl ester [CAS]	87344-06-7	GB 2115417	Analgescic, NSAID	Arthritis, rheumatoid
<b>Amylocaine</b> AN-152		532-59-2	WO 9719954	Anticancer, antibiotic	Cancer, prostate
anabolic steroids			WO 9848812	Cardiovascular	Heart failure
<b>Anagestone</b>		2740-52-5			
anagrelide	Imidazo[2,1-b]quinazolin-2(3H)-one, 6,7-dichloro-1,5-dihydro-, monohydrochloride [CAS]	58579-51-4 68475-42-3	GB 1418822	Haematological	Thrombocytosis
anastrozole	1,3-Benzenediacetonitrile, Alpha, Alpha, Alpha'-tetramethyl-5-(1H-1,2,4-triazol-1-ylmethyl)- [CAS]	120511-73-1 3861-73-2 31698-14-3 9046-56-4	EP 296749	Anticancer, hormonal	Cancer, breast
<b>Anazolene</b>					
<b>Ancitabine</b>					
<b>Ancrod</b>					
andolast	N-4'-[5-Tetrazolyl]-phenyl-4-(5-tetrazolyl)-benzamide	132640-22-3 360-66-7 521-17-5	EP 460083	Antiasthma	Asthma
<b>Androisoxazole</b>					
<b>Androstenediol</b>	21-(Acetyloxy)-17-hydroxypregna-4,9(11)-diene-3,20-dione	7753-60-8 4180-23-8; 104-46-1 (unspecified) 532-11-6		Ophthalmological	Macular degeneration
anecortave					
<b>Anethole</b>					
<b>Anethole Trithione</b>					
Angiogenix			US 6417205	Cardiovascular	Cardiomyopathy, ischaemic
<b>Angiotensin</b>		1407-47-2			
anhydrovinblastine	Vincalcaleukoblastine, 3',4'-didehydro-4'-deoxy- [CAS]	38390-45-3	US 6011041	Anticancer, other	Cancer, general
anidulafungin	Echinocandin B, 1-((4R,5R)-4,5-dihydroxy-N2-((4"-((pentyloxy)(1,1':4',1"-terphenyl)-4-yl)carbonyl)-L-ornithine)- [CAS]	166663-25-8	US 6384013	Antifungal	Infection, Candida, general

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Anileridine	Anistreplase [CAS]	144-14-9	EP 28489	Fibrinolytic	Infarction, myocardial
Aniracetam		72432-10-1			
Anisindione		117-37-3			
Anisomycin		22862-76-6			
Anisotropine		80-50-2			
Methylbromide anistreplase		81669-57-0			
Antazoline		91-75-8			
Anthiolimine		305-97-5			
Anthralin		1143-38-0			
Anthramycin		4803-27-4			
Anthraroabin	L-Ascorbic acid, mixt with 2-(diethylamino)ethyl 4-aminobenzoate monohydrochloride, disodium hydrogen phosphate, potassium benzoate and zinc sulfate (1:1) [CAS]	577-33-3	US 6436933	Anti-infective, other	Infection, anthrax
anthrax inhibitor			US 6426067	Anticancer, other	Cancer, general
antiangiogenic dendrimers					
Anticort		186646-39-9	WO 9640038	Anabolic	Cachexia
antidepressants			US 5898036	Antidepressant	Depression, general
anti-invasins			US 6303302	Antifungal	Infection, fungal, general
Antimony Potassium Tartrate		28300-74-5			
Antimony Sodium Thioglycollate		539-54-8			
Antimony Thioglycollamide		6533-78-4			
Antiprogesterin					
Antipyrine	19-Norpregna-4,9-dien-3-one,(acetylphenyl)-20,20,21,21,21-pentafluoro-17-hydroxy-(11 $\beta$ ,17 $\alpha$ ) [CAS]	211254-73-8	DE 19706061	Anticancer, hormonal	Cancer, breast
Antipyrine Salicylate		60-80-0			
		520-07-0			
antithrombin III	Antithrombin, III [CAS]	9000-94-6		Blood fraction	Antithrombin III deficiency
		90170-80-2			

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anxiolytics				Anxiolytic	Anxiety, general
AP-521	N-Piperonyl-2-amino-1,2,3,4-tetrahydrobenzo(b)thieno(2,3-c)pyridine-3-carbamide	151227-08-6	US 5756538		
AP-5280				Anxiolytic	Anxiety, general
Apalcillin		63469-19-2	WO 9321189 US 5965118	Anticancer, alkylating	Cancer, general
apaziquone	1H-Indole-4,7-dione, 5-(1-aziridinyl)-3-(hydroxymethyl)-2-(3-hydroxy-1-propenyl)-1-methyl-, (E)- [CAS]	114560-48-4	WO 8706227	Anticancer, alkylating	Cancer, breast
Apazone		13539-59-8			
$\alpha$ -Phenylbutyramide		90-26-6			
Apocodeine		641-36-1			
apomine	Phosphonic acid, (2-(3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl)ethylidene)bis- tetrakis(1-methylethyl) ester [CAS]	126411-13-0		Anticancer, other	Cancer, prostate
apomorphine	4H-Dibenzo[de,g]quinoline-10,11-diol, 5,6,6a,7-tetrahydro-6-methyl-, hydrochloride	314-19-2 58-00-4			
apraclonidine	1,4-Benzenediamine, 2,6-dichloro-N1-(4,5-dihydro-1H-imidazol-2-yl)- [CAS]	66711-21-5 73218-79-8	US 4517199	Formulation, transmucosal, nasal	Impotence
aprepitant	3H-1,2,4-Triazol-3-one, 5-[[[(2R,3S)-2-[(1R)-1-{3,5-bis(trifluoromethyl)phenyl}ethoxy]-3-(4-fluorophenyl)-4-morpholinyl]methyl]-1,2-dihydro- [CAS]	170729-80-3 33237-74-0	US 5719147	Antiemetic	Chemotherapy-induced nausea and vomiting
aprilidine	1,3-Propanediamine, N-(2,3-dihydro-1H-inden-2-yl)-N',N'-diethyl-N-phenyl-[CAS]	37640-71-4 77-02-1	GB 1321424	Antiarrhythmic	
Aprobarbital		528-92-7			
Apronalide		9087-70-1			
Aprotinin		137159-92-3			
Aptiganel					
AQ4N	9,10-Anthracenedione, 1,4-bis((2-(dimethylloxidoamino)ethyl)amino)-5,8-dihydroxy-[CAS]	136470-65-0	US 5132327 US 6204257	Anticancer, other Anaesthetic, injectable	Cancer, general Anaesthesia
Aquavan					

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AR-116081	(R)-N-[5-methyl-8-(4-methylpiperazin-1-yl)-1,2,3,4-tetrahydro-2-naphthyl]-4-morpholinobenzamide		US 6107324	Neuroleptic	Unspecified
AR-A2		506-32-1		Anxiolytic	Anxiety, general
Arachidonic Acid					
aranidipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, methyl 2-oxopropyl ester- [CAS]	86780-90-7	GB 2111978	Antihypertensive, other	Hypertension, general
arbekacin	D-Streptamine, O-3-amino-3-deoxy-Alpha-D-glucopyranosyl-(1-6)-O-[2,6-diamino-2,3,4,6-tetraideoxy-Alpha-D-erythrohexopyranosyl-(1-4)]-N1-(4-amino-2-hydroxy-1-oxobutyl)-2-deoxy-, (S)- [CAS]	51025-85-5 75282-65-4	US 4001208	Aminoglycoside antibiotic	Infection, general
Arbidol	1H-indole-3-carboxylic acid, 6-bromo-4-((dimethylamino)methyl)-5-hydroxy-1-methyl-2-((phenylthio)methyl)-, ethylester, monohydrochloride [CAS]	131707-23-8	WO 9008135	Immunostimulant, other	Infection, influenza virus
arbutamine	1,2-Benzenediol, 4-[1-hydroxy-2-[[4-(4-hydroxyphenyl)butyl]amino]ethyl]-, (R)- [CAS]	128470-16-6	WO 9220324	Diagnostic	Diagnosis, coronary
Arcitumomab	Heparin [CAS]	154361-48-5		Anticoagulant	Thrombosis, venous
ardeparin	1,2,5,6-Tetrahydro-1-methyl-3-pyridine carboxylic acid methyl ester	9005-49-6		Formulation, transdermal, patch	Alzheimer's disease
arecoline	2-Piperidinecarboxylic acid, 1-[5-[(aminoiminomethyl)amino]-1-oxo-2-[[[(1,2,3,4-tetrahydro-3-methyl-8-quinolyl)sulfonyl]amino]pentyl]-4-methyl- [CAS]	74863-84-6 74-79-3 153259-65-5	EP 8746	Anticoagulant	Thrombosis, arterial
argatroban					
Arginine					
Ariflo®	2(1H)-Quinolinone, 7-[4-[4-(2,3-dichlorophenyl)-1-piperazinyl]butoxy]-3,4-dihydro- [CAS]				
aripiprazole		129722-12-9	EP 367141	Neuroleptic	Schizophrenia

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arofylline	1H-Purine-2,6-dione, 3-(4-chlorophenyl)-3,7-dihydro-1-propyl- [CAS]	136145-07-8	EP 435811	COPD treatment	Chronic obstructive pulmonary disease
arotinolol	2-Thiophenecarboxamide, 5-[2-[[3-[(1,1-dimethylethyl)amino]-2-hydroxypropyl]thio]-4-thiazolyl]-, (±)- [CAS]	104766-23-6 68377-92-4 618-22-4	US 3932400	Antihypertensive, adrenergic	Hypertension, general
<b>Arsacetin</b>	Arsenic oxide (As <sub>2</sub> O <sub>3</sub> ) [CAS]	1327-53-3 139-93-5 119-96-0 75887-54-6 123407-36-3 (Z-form)		Anticancer, other	Cancer, leukaemia, acute myelogenous
arsenic trioxide					
<b>Arsphenamine</b>					
<b>Arsthinol</b>					
<b>Arteether</b>					
<b>Arteflene</b>					
<b>Artemether</b>					
<b>Artemisinin</b>					
artemotil	3,12-Epoxy-12H-pyrano[4,3-]-1,2-benzodioxepin, 10-ethoxydecahydro-3,6,9-trimethyl-, [3R-(3A $\alpha$ ,5a $\beta$ ,6 $\beta$ ,8a $\beta$ ,9a $\alpha$ ,10A $\alpha$ ,12 $\beta$ ,12aR*)]- [CAS]	75887-54-6		Antimalarial	Infection, malaria
	Butanedioic acid mono-[[3R,5aS,6R,8aS,9R,10R,12R,12aR)-decahydro-3,6,9-trimethyl-3,12-epoxy-12H-pyrano[4,3-]-1,2-benzodioxepin-10-yl]ester				
artesunate	Benzo(b)thiophene-6-ol, 2-(4-methoxyphenyl)-3-(4-(2-(1-piperidinyl)ethoxy)phenoxy)- [CAS]	88495-63-0		Formulation, transmucosal, systemic	Infection, malaria
arzoifene	Spiro(pyrrolidine-3,4'-(1'H)-pyrrolo(1,2-a)pyrazine)-1',2,3',5'(2'H)-tetrone, 2'-((4-bromo-2-fluorophenyl)methyl)-, (3'R)-[CAS]	182133-27-3	WO 9609041	Anticancer, hormonal	Cancer, breast
AS-3201		147254-64-6 50-78-2	EP 520320	Symptomatic antidiabetic	Diabetic complication, general
ASA	Benzoic acid, 2-(acetyloxy)- [CAS]	56449-07-1		Formulation, modified-release, other	Pain, general

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<b><math>\alpha</math>-Santonin</b>	1H-Dibenz[2,3:6,7]oxepino[4,5-c]pyrrole, 5-chloro-2,3,3a,12b-tetrahydro-2-methyl-, trans-, (Z)-2-butenedioate (1:1) [CAS]	481-06-1	WO 9523600	Neuroleptic	Psychosis, general
<b>Ascaridole</b>		512-85-6			
<b>Ascorbic Acid</b>		50-81-7			
asenapine	Benzeneacetamide, N-[2-(3-hydroxy-1-pyrrolidinyl)-1-phenylethyl]-N-methyl- $\alpha$ -phenyl-, [S-(R*,R*)]- [CAS]	85650-56-2	DE 4215213	GI inflammatory/bowel disorders	Irritable bowel syndrome
asimadoline	11 $\beta$ -[4-(Hydroxyiminomethyl)phenyl]-17 $\beta$ -methoxy-17 $\alpha$ -[4-(methoxymethyl)estr-4,9-dien-3-one	153205-46-0	EP 0648778	Menstruation disorders	Endometriosis
asoprisnil	Glycinamide, N-methyl-D-asparaginy-N-(2-carboxy-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]hept-6-yl)-D-2-(4-hydroxyphenyl)-, [2S-(2 $\alpha$ ,5 $\alpha$ ,6 $\beta$ )]-[CAS]	199396-76-4	GB 1533413	Penicillin, injectable Urological	Infection, respiratory tract, general Renal failure
<b>Asoxime</b>		34433-31-3			
<b>Aspartic Acid</b>		56-84-8			
<b>Aspidin</b>		584-28-1			
<b>Aspidinol</b>		519-40-4			
<b>Aspirin</b>		50-78-2			
<i>Aspirin</i> , <i>Dipyridamole</i>	4-Acridinecarboxamide, 9-[[2-methoxy-4-[(methylsulfonyl)amino]phenyl]amino]-N,5-dimethyl- [CAS]	63358-49-6	EP 39224	Anticancer, other	Cancer, general
aspoxicillin		90597-58-3			
<b>AST-120</b>		68844-77-9			
<b>Astemizole</b>	(N-[2-[4-(5H-Dibenzo[a,d]cyclohepten-5-ylidene)-piperidinylethyl]-1-formyl-4-piperidinecarboxamide monohydrochloride monohydrate	80841-47-0 80841-48-1	DE 3338212	Antithrombotic Anticancer, hormonal	Thrombosis, general Cancer, breast
AT-1015	Androsta-1,4-diene-3,17-dione, 1-methyl-[CAS]	96301-34-7			
atamestane					

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atazanavir	2,5,6,10,13-Pentazatetradecanedioic acid, 3,12-bis(1,1-dimethylethyl)-8-hydroxy-4,11-dioxo-9-(phenylmethyl)-6-((4-(2-pyridinyl)phenyl)methyl)- dimethyl ester, (3S,8S,9S,12S)-, sulfate (1:1) (salt) [CAS]	229975-97-7		Antiviral, anti-HIV	Infection, HIV/AIDS
atenolol	Benzeneacetamide, 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]- [CAS]	29122-68-7 73677-19-7	GB 1285038	Antihypertensive, adrenergic	Hypertension, general
atenolol + chlorthalidone	Benzeneacetamide, 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-, mixt. with 2-chloro-5-(2,3-dihydro-1-hydroxy-3-oxo-1H-isoindol-1-yl)benzenesulfonamide [CAS]	73677-19-7	US 3836671	Formulation, fixed-dose combinations	Hypertension, general
atenolol + nifedipine	Benzeneacetamide, 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]- + 4-(2'-nitrophenyl)-2,6-dimethyl-3,5-dicarbomethoxy-1,4-dihydropyridine	98-55-5 136816-75-6		Formulation, fixed-dose combinations	Hypertension, general
$\alpha$ -Terpineol Ateviridine	1H-Imidazole, 4-(2-ethyl-2,3-dihydro-1H-inden-2-yl)- [CAS]	104054-27-5	EP 183492	Reproductive/gonadal, general	Sexual dysfunction, female
atiprimod dimaleate ATL-146e	2-Azaspivo[4.5]decane-2-propanamine, N,N-diethyl-8,8-dipropyl, dimaleate	130065-61-1	US 5744495 US 6232297	Antiarthritic, immunological Imaging agent	Arthritis, rheumatoid Unspecified
$\alpha$ -Tocopherol	Benzenepropanamine, N-methyl-Gamma-(2-methylphenoxy)-, (R)- [CAS]	59-02-9	EP 52492	Neurological	Attention deficit disorder
atomoxetine	1H-Pyrrole-1-heptanoic acid, 2-(4-fluorophenyl)- $\beta$ ,delta-dihydroxy-5-(1-methylethyl)-3-phenyl-4-[(phenylamino)carbonyl]- [CAS]	82248-59-7 83015-26-3			
atorvastatin	Oxytocin, 1-(3-mercaptopropanoic acid)-2-(O-ethyl-D-tyrosine)-4-L-threonine-8-L-ornithine- [CAS]	134523-03-8 134523-00-5	EP 409281	Hypolipaeamic/Antiatherosclerosis	Hypercholesterolaemia
atosiban		90779-69-4	EP 112809	Labour inhibitor	Labour, preterm

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atovaquone	1,4-Naphthalenedione, 2-[4-(4-chlorophenyl)cyclohexyl]-3-hydroxy-, trans- [CAS]	95233-18-4	EP 123238	Antifungal	Infection, Pneumocystis jiroveci
atovaquone + proguanil	1,4-Naphthalenedione, 2-[4-(4-chlorophenyl)cyclohexyl]-3-hydroxy-, trans + N-(4-chloro-phenyl)-N-(1-methylethyl)imidodicarbonimidic diamide			Antimalarial	Infection, malaria
atracurium	Isoquinolinium, 2,2'-[1,5-pentanediy]bis[oxy(3-oxo-3,1-propanediyl)]bis[1-[(3,4-dimethoxyphenyl)methyl]-1,2,3,4-tetrahydro-6,7-dimethoxy-2-methyl- [CAS]	64228-81-5	US 4179557	Muscle relaxant	Surgery adjunct
atrasentan	3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-(dibutylamino)-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)- [CAS]	173937-91-2 85637-73-6	WO 9730045	Anticancer, other	Cancer, prostate
<b>Atrial Natriuretic Peptide</b>					
<b>Atrolactamide</b>		2019-68-3			
<b>Atropine</b>		51-55-8			
Augmentin		74469-00-4		Formulation, modified-release, other	Infection, respiratory tract, general
auranofin		34031-32-8	US 3708579	Antiarthritic, other	Arthritis, rheumatoid
<b>Aurothiogluucose</b>		12192-57-3			
avasimibe	Gold, (1-thio-β-D-glucopyranose 2,3,4,6-tetraacetato-S)(triethylphosphine)-[CAS]	166518-60-1 70356-09-1 257892-33-4	US 5491172	Hypolipaeic/Antiatherosclerosis	Atherosclerosis
<b>Avobenzone</b> AWD-12-281	Sulfamic acid, [[2,4,6-tris(1-methylethyl)phenyl]acetyl]-, 2,6-bis(1-methylethyl)phenyl ester [CAS]	320-67-2 115-46-8		Antiallergic, non-asthma	Rhinitis, allergic, general
<b>Azacitidine</b>	AWD 12-281 [CAS]				
<b>Azacyclonol</b>					
azanidazole	2-Pyrimidinamine, 4-[2-(1-methyl-5-nitro-1H-imidazol-2-yl)ethenyl]-, (E)- [CAS]	62973-76-6	US 3882105	Antibacterial, other	Infection, trichomoniasis

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azapropazone	1H-Pyrazolo[1,2-a][1,2,4]benzotriazine-1,3(2H)-dione, 5-(dimethylamino)-9-methyl-2-propyl- [CAS]	13539-59-8	FR 1440629	Anti-inflammatory	
<b>Azaserine</b>	2H-1,4-Benzoxazine-8-carboxamide, N-1-azabicyclo[2.2.2]oct-3-yl-6-chloro-3,4-dihydro-4-methyl-3-oxo-, monohydrochloride- [CAS]	115-02-6 123040-16-4 123040-94-8 123040-96-0 123040-69-7 3964-81-6			Nausea and vomiting, general
azasetron	6-[(1-Methyl-4-nitro-1H-imidazol-5-yl)thio]-1H-purine		EP 313393	Antiemetic	
<b>Azatadine</b>	glycine	446-86-6		Formulation, oral, other	Transplant rejection, bone marrow
azathioprine	3,4-Difluorophenylcyclopropylamine			Analgesic, other	Pain, neuropathic
AZD-4282	Nonanedioic acid [CAS]	123-99-9		Antithrombotic	Thrombosis, arterial
AZD-6140	1(2H)-Phthalazinone, 4-[(4-chlorophenyl)methyl]-2-(hexahydro-1-methyl-1H-azepin-4-yl)-, monohydrochloride [CAS]	58581-89-8 79307-93-0		Antiacne	Acne
azelaic acid	3,5-Pyridinedicarboxylic acid, 2-amino-1,4-dihydro-6-methyl-4-(3-nitrophenyl)-, 3-[1-(diphenylmethyl)-3-azetidyl] 5-(1-methylethyl)ester, (+/-)- [CAS]		GB 1377231	Antiasthma	Asthma
azelnidipine		123524-52-7	EP 266922	Antihypertensive, other	Hypertension, general
<b>Azidamfenicol</b>		13838-08-9			
<b>Azidocillin</b>		17243-38-8			
<b>Azimilide</b>		149908-53-2			
<b>Azintamide</b>		1830-32-6 76801-85-9 83905-01-5 92395-24-9			
azithromycin	9-deoxy-9a-aza-9a-methyl-9a-homoerythromycin-A 4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-[[[(2-oxo-1-imidazolidinyl)carbonyl]amino]phenylacetyl]amino]-, [2S-[2.alpha.,5.alpha.,6.alpha.,6.alpha.]]- [CAS]		US 4328334	Macrolide antibiotic	Infection, respiratory tract, lower
azlocillin		37091-65-9 37091-66-0	GB 1392849	Penicillin, injectable	Infection, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Azosemide</b>	Propanoic acid, 2-[[[1-(2-amino-4-thiazolyl)-2-[(2-methyl-4-oxo-1-sulfo-3-azetidinyl)amino]-2-oxoethylidene]amino]oxy]-2-methyl-, [2S-[2Alpha,3Beta(Z)]]-[CAS]	27589-33-9			
aztreonam	Sodium 5-isopropyl-3,8-dimethyl-1-azulene sulfonate	104184-69-2 78110-38-0	GB 2071650	Beta-lactam antibiotic	Infection, general
azulene		6223-35-4	EP 88958	Formulation, modified-release, other	Inflammation, general
bacampicillin	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[[[aminophenylacetyl]amino]-3,3-dimethyl-7-oxo-, 1-[(ethoxycarbonyl)oxy]ethyl ester, [2S-[2Alpha,5Alpha,6Beta(S*)]]-[CAS]	37661-08-8 50972-17-3 1405-87-4	GB 1363506	Penicillin, oral	Infection, general
<b>Bacitracin</b>	Beta-(Aminomethyl)-4-chlorobenzenepropionic acid [CAS]	1134-47-0 491-67-8		Formulation, implant	Spastic paralysis
balofloxacin	3-Quinolonecarboxylic acid, 1-cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-7-[3-(methylamino)-1-piperidinyl]-4-oxo- [CAS]	127294-70-6	EP 342675	Quinolone antibacterial	Infection, urinary tract
balsalazide	Benzoic acid, 5-[[4-[(2-carboxyethyl)amino]carbonyl]phenyl]azo]-2-hydroxy-, (E)- [CAS]	80573-04-2	US 4412992	GI inflammatory/bowel disorders	Colitis, ulcerative
bambuterol	Carbamic acid, dimethyl-, 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]-1,3-phenylene ester, monohydrochloride [CAS]	81732-46-9 81732-65-2 3703-79-5 2016-63-9 4945-47-5 57-44-3	EP 43807	Antiasthma	Asthma
<b>Bamethan</b> <b>Bamifylline</b> <b>Bamipine</b> <b>Barbital</b>	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, methyl-1-(phenylmethyl)-3-pyrrolidinyl ester, [S-(R*,R*)]-	104713-75-9 104757-53-1 71863-56-4	US 4220649	Antihypertensive, other	Hypertension, general
barnidipine					

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BAS-118	N-Methyl-3-[2-(2-naphthyl)acetyl]amino]benzamide	1339-92-0		Antibacterial, other	Infection, Helicobacter pylori
Basic Aluminum Carbonate Gel		179045-86-4			
Basiliximab		130370-60-4			
Batimastat		9039-61-6			
Batroxobin					
Bay-41-2272	5-cyclopropyl-2-[1-(2-fluoro-benzyl)-1H-pyrazolo[3,4-b]pyridine-3-yl]pyrimidine-4-ylamine			Male sexual dysfunction	Sexual dysfunction, male, general
Bay-41-8543	2-[1-(2-Fluorobenzyl)-1H-pyrazolo[3,4-b]pyridin-3-yl]-5-(4-morpholinyl)pyrimidine-4,6-diamine			Cardiovascular	Unspecified
BAY-43-9006	N-(4-chloro-3-(trifluoromethyl)phenyl)-N'-(4-(2-(N-methylcarbamoyl)-4-pyridyloxy)phenyl)urea			Anticancer, other	Cancer, liver
BAY-57-1293 bazedoxifen	N-[5(aminosulfonyl)-4-methyl-1,3-thiazol-2-yl]-N-methyl-2-[4-(2-pyridinyl)phenyl]acetamide			Antiviral, other	Infection, herpes simplex virus
$\beta$ -Benzalbutyramide	TSE 424 [CAS]	198481-33-3 7236-47-7	EP 802183	Osteoporosis treatment	Osteoporosis
BBR-3464	Platinum(4+), hexaaminedichlorobis( $\mu$ -(1,6-hexanediamine-N:N'))(tri- stereoisomer, tetranitrate [CAS])	172903-00-3	US 5744497 US 5519029 US 6060616	Anticancer, alkylating Anticancer, antibiotic Anticancer, alkylating	Cancer, lung, non-small cell Cancer, prostate Cancer, general
BBR-3576					
BBR-3610					
$\beta$ -Carotene	(-)-2-R-dihydroxyphosphinoyl-5-(S)-(guanin-9'-yl-methyl)tetrahydrofuran	7235-40-7			
BCH-1868					
Bebeerine		477-60-1		Anticancer, antimetabolite	Cancer, general
Beclamide		501-68-8			

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
beclometasone	Pregna-1,4-diene-3,20-dione, 9-chloro-11 $\beta$ ,17,21-trihydroxy-16 $\beta$ -methyl, [CAS]	5534-09-8 4419-39-0	WO 0006132	Formulation, inhalable, solution	Asthma
<b>Befloxatone</b>	Ethanone, 1-[7-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-2-benzofuranyl]-[CAS]	134564-82-2 39543-79-8 39552-01-7		Antiglaucoma	
befunolol		64-65-3 302-40-9			
<b>Bemegride</b>	1H-1-Benzazepine-1-acetic acid, 3-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]-2,3,4,5-tetrahydro-2-oxo-, [S-(R*,R*)]-[CAS]	86541-74-4 86541-75-5 86541-78-8	EP 72352	Antihypertensive, renin system	Hypertension, general
<b>Benactyzine</b>	1-Propanamine, N,N-dimethyl-3-[[1-(phenylmethyl)cycloheptyloxy]-, (E)-2-butenedioate (1:1) [CAS]	14286-84-1 2179-37-5	WO 9829409	Vasodilator, peripheral	
benazepril	L-Lysine, mono[[[1-(phenylmethyl)-1H-indazol-3-yl]oxy]acetate] [CAS]	81919-14-4 20187-55-7	GB 2081708	Ophthalmological	
bencyclane		73-48-3 78718-25-9			
bendazac					
<b>Bendroflumethiazide</b>					
<b>Benexate</b>	Ethanol, 2-[[1-methyl-2-[3-(trifluoromethyl)phenyl]ethyl]amino]-, benzoate (ester) [CAS]	23602-78-0 23642-66-2	GB 1175516	Hypolipaeic/Antiatherosclerosis	
benfluorex		22457-89-2 3447-95-8			
<b>Benfotiamine</b>					
<b>Benfurodil</b>					
benidipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, methyl 1-(phenylmethyl)-3-piperidinyl ester, monohydrochloride (R*,R*)-(+/-)-[CAS]	105979-17-7 91599-74-5 5003-48-5 67434-14-4 99-43-4 2062-84-2 2156-27-6 322-35-0	EP 63365	Antihypertensive, other	Hypertension, general
<b>Benorylate</b>					
<b>Benoxaprofen</b>					
<b>Benoxinate</b>					
<b>Benperidol</b>					
<b>Benproperine</b>					
<b>Benserazide</b>					



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
bentazepam	2H-[1]Benzothieno[2,3-e]-1,4-diazepin-2-one, 1,3,6,7,8,9-hexahydro-5-phenyl[CAS]	29462-18-8	DE 2005276	Anxiolytic	
<b>Bentiromide</b>		37106-97-1			
<b>Bentoquatam</b>		1340-69-8			
<b>Benzalkonium</b>		8001-54-5			
<b>Benzarone</b>		1477-19-6			
benzbromarone	Methanone, (3,5-dibromo-4-hydroxyphenyl)(2-ethyl-3-benzofuranyl)-[CAS]	3562-84-3	US 3012042	Antigout	
<b>Benzethonium</b>		121-54-0			
<b>Benzetimide</b>		14051-33-3			
<b>Benzilonium</b>		1050-48-2			
<b>Benzlodarone</b>		68-90-6			
benznidazole	N-benzyl-2-nitroimidazole-1-acetamide	22994-85-0	GB 1138529	Protozoacide	
benzocaine	Benzoic acid, 4-amino-, ethyl ester	94-09-7		Formulation, fixed-dose combinations	Pain, musculoskeletal
<b>Benzocetamine</b>		17243-39-9			
<b>Benzonatate</b>		104-31-4			
<b>Benzoxonium Chloride</b>		19379-90-9			
benzoyl peroxide	Peroxide, dibenzoyl [CAS]	94-36-0		Formulation, other	Acne
<b>Benzoylpas</b>		13898-58-3			
<b>Benzphetamine</b>		156-08-1			
<b>Benzpiperylon</b>		53-89-4			
<b>Benzquinamide</b>		63-12-7			
<b>Benzthiazide</b>		91-33-8			
<b>Benztropine</b>		132-17-2			
benzylamine	1-Propanamine, N,N-dimethyl-3-[[1-(phenylmethyl)-1H-indazol-3-yl]oxy]- [CAS]	132-69-4		Stomatological, reproductive/gonadal, anti-inflammatory	
<b>Benzyl Benzoate</b>		642-72-8			
<b>Benzylhydrochlorothiazide</b>		120-51-4			
<b>Benzylmorphine</b>		1824-50-6			
		14297-87-1			

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<b>Bephenium Hydroxynaphthoate</b>	1-Piperidinebutanoic acid, 4-((4-chlorophenyl)-2-pyridinylmethoxy)-, (S)-, monobenzenesulfonate [CAS]	3818-50-6			
bepotastine	1-Pyrrolidineethanamine, β-[(2-methylpropoxy)methyl]-N-phenyl-N-(phenylmethyl)- [CAS]	190786-44-8 190786-43-7 64706-54-3 74764-40-2 74764-75-3	WO 9829409	Antiallergic, non-asthma	Allergy, general
bepiridil	1H-Cyclopenta[b]benzofuran-5-butanoic acid, 2,3,3a,8b-tetrahydro-2-hydroxy-1-(3-hydroxy-4-methyl-1-octen-6-ynyl)- [CAS]	88475-69-8 88430-50-6 2086-83-1 484-20-8 78499-27-1 119257-34-0	EP 146155	Antianginal	Angina, general
beraprost			US 4474802	Prostaglandin	Peripheral vascular disease
<b>Berberine</b>					
<b>Bergapten</b>					
<b>Bermopropfen</b>					
<b>Besipirdine</b>					
betahistine	2-Pyridineethanamine, N-methyl-, dihydrochloride	5579-84-0 5638-76-6 107-43-7		Formulation, modified-release, <=24hr Metabolic and enzyme disorders	Meniere's disease Homocystinuria
betaine	Betaine- [CAS]				
betamethasone	Pregna-1,4-diene-3,20-dione, 9-fluoro-11,17,21-trihydroxy-16-methyl-, (11β,16β)- [CAS]	378-44-9 3440-28-6 3734-24-5		Formulation, dermal, topical	Psoriasis
<b>Betamipron</b>					
<b>Betasine</b>					
betaxolol	2-Propanol, 1-[4-[2-(cyclopropylmethoxy)ethyl]phenoxy]-3-[(1-methylethyl)amino]- [CAS]	63659-18-7 63659-19-8 105-20-4 590-63-6 55-73-2 3818-62-0 500-34-5	US 4252984	Antihypertensive, adrenergic	Hypertension, general, glaucoma
<b>Betazole</b>					
<b>Bethanechol</b>					
<b>Bethanidine</b>					
<b>Betoxycaine</b>					
<b>β-Eucaine</b>					
bevantolol	2-Propanol, 1-[2-(3,4-dimethoxyphenyl)ethyl]amino]-3-(3-methylphenoxy)- [CAS]	42864-78-8 59170-23-9 5205-82-3	US 3857891	Antihypertensive, adrenergic	Hypertension, general
<b>Bevonium</b>					

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bexarotene	Benzoic acid, 4-(1-(5,6,7,8-tetrahydro-3,5,5,8,8-pentamethyl-2-naphthalenyl)ethenyl)- [CAS]	153559-49-0	WO 9321146	Anticancer, other	Cancer, lymphoma, T-cell
bezafibrate	Propanoic acid, 2-[4-[2-[(4-chlorobenzoyl)amino]ethyl]phenoxy]-2-methyl- [CAS]	41859-67-0 15301-48-1	GB 1359264	Hypolipaeamic/Antiatherosclerosis	
<b>Bezitramide</b>					
BG-9928	10,11-dihydro-10-hydroxyimino-5H-dibenz[b,f]azepine-5-carboxamide	166374-48-7		Cardio stimulant	Heart failure
BIA-2-024		199997-15-4	WO 9745416	Antiepileptic	Epilepsy, general
BIA-2-093	(S)-(-)-10-acetoxy-10,11-dihydro-5H-dibenzo[b,f]azepine-5-carboxamide- [CAS]	236395-14-5		Antiepileptic	Epilepsy, general
BIA-3-202	1-(3,4-dihydroxy-5-nitrophenyl)-2-phenylethanone	274925-86-9 493-75-4	EP 1010688	Antiparkinsonian	Parkinson's disease
<b>Bialamicol</b>					
biapenem	5H-Pyrazolo[1,2-a][1,2,4]triazol-4-ium, 6-[[[2-carboxy-6-(1-hydroxyethyl)-4-methyl-7-oxo-1-azabicyclo[3.2.0]hept-2-en-3-yl]thio]-6,7-dihydro-, hydroxide, inner salt, [4R-[4 $\alpha$ ,5 $\beta$ ,6 $\beta$ (R*)]]- [CAS]	120410-24-4 15585-70-3 6915-57-7	EP 289801	Beta-lactam antibiotic	Infection, beta-lactamase resistant
<b>Bibenzonium</b>					
<b>Bibrocatol</b>	Propanamide, N-[4-cyano-3-(trifluoromethyl)phenyl]-3-[(4-fluorophenyl)sulfonyl]-2-hydroxy-2-methyl-, (+/-)- [CAS]	90357-06-5 66504-75-4 71195-57-8	EP 100172 DE 2740562 US 6294585	Anticancer, hormonal Analgesic, other Dermatological	Cancer, prostate Pain, general Unspecified
bicalutamide	3-Azabicyclo[3.1.0]hexane, 1-(4-methylphenyl)-, (+/-)- [CAS]				
bicifadine					
bicyclic monoterpene diols					
<b>Bidlisomide</b>		116078-65-0			
<b>Bietamiverine</b>		479-81-2			
<b>Bietanautine</b>		6888-11-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Bietaserpine	1-Butanamine, N-methyl-4-[2-(phenylmethyl)phenoxy]-, hydrochloride [CAS]	53-18-9			
bifemelane		62232-46-6			
Bifluranol		90293-01-9	GB	Cognition enhancer	Attention deficit disorder
		34633-34-6			
		60628-96-8			
bifonazole	1H-Imidazole, 1-([1,1'-biphenyl]-4-ylphenylmethyl)- [CAS]	60629-08-5	US	Antifungal	Infection, fungal, general
	5-Heptenamide, 7-(3,5-dihydroxy-2-(3-hydroxy-5-phenyl-1-pentenyl)cyclopentyl)-N-ethyl (1R-(1Alpha(Z)2beta(1E,3S,3Alpha,5Alpha)) [CAS]	60629-09-6			
bimatoprost	N-[2-hydroxy-3-(1-piperidinyl)propoxy]-3-pyridinecarboximidoyl chloride, (Z)-2-butanedioate (1:1)	155206-00-1	US	Prostaglandin	Glaucoma
bimoclomol	(1,1'-Biphenyl)-3-acetic acid, 3',3'''-(1,6-hexanediyl)bis(6'-Alpha-D-mannopyranosyloxy)-, [CAS]	130493-04-8	US	Symptomatic antidiabetic	Neuropathy, diabetic
bimosiamose		187269-40-5	US	Antiasthma	Asthma
Binifibrate		69047-39-8			
binodenoson	Adenosine, 2-((cyclohexylmethylene)hydrazino)- [CAS]	144348-08-3			
Biomed-101					
Biotin		58-85-5			
Biperiden		514-65-8	US	Vasodilator, coronary Anticancer, other	Diagnosis, coronary Cancer, renal
	2-Piperidinecarboxylic acid, 1-(oxo(3,4,5-trimethoxyphenyl)acetyl)-4-(3-pyridinyl)-1-(3-(3-pyridinyl)propyl)butyl ester, (S)-, 2-hydroxy-1,2,3-propanetricarboxylate (1:2) [CAS]	174254-13-8			
biricodar	1-Butanone, 1-(4-fluorophenyl)-4-(3,4,6,7,12,12a-hexahydropyrazino[1',2':1,6]pyrido[3,4-b]indol-2(1H)-yl)- [CAS]	159997-94-1		Radio/chemosensitizer	Cancer, breast
biriperone		42021-34-1	DE		
Bisacodyl		603-50-9		Neuroleptic	

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Bisantrene		78186-34-2			
Bisbentiamine		2667-89-2			
Bisdequalinium		52951-36-7			
Bismuth Aluminate		12284-76-3			
Bismuth		53897-25-9			
Butylthiolaurate		52951-37-8			
Bismuth Ethyl					
Camphorate		138-58-9			
Bismuth Iodosubgallate					
Bismuth Sodium Iodide		53778-50-0			
Bismuth Sodium		5798-43-6			
Triglycollamate		5892-10-4			
Bismuth Subcarbonate		22650-86-8			
Bismuth Subgallate		1304-85-4			
Bismuth Subnitrate		14882-18-9			
Bismuth Subsalicylate		5175-83-7			
Bismuth					
Tribromophenate					
bisoprolol	2-Propanol, 1-[4-[[2-(1-methylethoxy)ethoxy]methyl]phenoxy]-3-[(1-methylethyl)amino]- [CAS]	104344-23-2 66722-44-9	GB 1532380	Antihypertensive, adrenergic	Heart failure
bisoprolol + HCTZ	2-Propanol, 1-[4-[[2-(1-methylethoxy)ethoxy]methyl]phenoxy]-3-[(1-methylethyl)amino] mixt. with 6-chloro-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide 2-Propanol, 1-[4-[[2-(1-methylethoxy)ethoxy]methyl]phenoxy]-3-[(1-methylethyl)amino] mixt. with 6-chloro-3-(dichloromethyl)-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide			Formulation, fixed-dose combinations	Hypertension, general
bisoprolol+trichloromethiazide				Formulation, fixed-dose combinations	Hypertension, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Bisoxatin		14008-48-1			
Bithionol		97-18-7			
Bitolterol		30392-40-6			
Bitoscanate		4044-65-9			
BL-3875		11056-06-7	WO 0218378	Anti-inflammatory	Unspecified
bleomycin	Bleomycin [CAS]	9041-93-4		Formulation, transdermal, enhanced	Cancer, head and neck
blonanserine	Cycloocta[b]pyridine, 2-(4-ethyl-1-piperazinyl)-4-(4-fluorophenyl)-5,6,7,8,9,10-hexahydro- [CAS]	132810-10-7	EP 385237 EP 639577	Neuroleptic Anticancer, other	Schizophrenia Cancer, breast
BMS-184476	cis-(+/-)-2-(Ethylthio)-5,7-dihydroxy-8-(3-hydroxy-1-methyl-4-piperidinyl)-4H-1-benzopyran-4-one		WO 9742949	Anticancer, other	Cancer, general
BMS-387032	4-[2-(aminomethyl)-1,3-thiazol-4-yl]-2,6-di-tert-butylphenol, dihydrochloride				
BN-82451	Ethanesulfonic acid, 2,2'-dithiobis-, disodium salt [CAS]	16208-51-8		Neuroprotective	Unspecified
BNP-7787				Radio/chemoprotective	Chemotherapy-induced nausea and vomiting
BO-653	5-Benzofuranol, 4,6-bis(1,1-dimethylethyl)-2,3-dihydro-2,2-dipentyl- [CAS]	157360-23-1	WO 9408930	Hypolipaeic/Antiatherosclerosis	Atherosclerosis
Bolandirol		19793-20-5			
Bolasterone		1605-89-6			
Boldenone		846-48-0			
bopindolol	2-Propanol, 1-[(1,1-dimethylethyl)amino]-3-[(2-methyl-1H-indol-4-yl)oxy]-, benzoate (ester), (+/-)- [CAS]	62658-63-3 82857-38-3	US 4340541	Antihypertensive, adrenergic	Hypertension, general
Bornyl Chloride		464-41-5			
Bornyl Salicylate	Boronic acid, [(1R)-3-methyl-1-[(2S)-1-oxo-3-phenyl-2-[(pyrazinylcarbonyl)amino]propyl]amino]butyl]- [CAS]	560-88-3			
bortezomib		179324-69-7	US 6271199	Anticancer, other	Cancer, myeloma



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bosentan	Benzenesulfonamide, 4-(1,1-dimethylethyl)-N-[6-(2-hydroxyethoxy)-5-(2-methoxyphenoxy)]-2,2'-bipyrimidin]-4-yl]-[CAS]	147536-97-8	EP 633259	Vasodilator, peripheral	Hypertension, pulmonary
BP2.94	Phenol, 2-[[[(1R)-2-(1H-imidazol-4-yl)-1-methylethyl]imino]phenylmethyl]- [CAS]	139191-80-3	WO 9117146	Respiratory	Rhinitis, general
BP4.897	N-[4-[4-(2-methoxyphenyl)-1-piperazinyl]butyl]naphthalene-2-carboxamide	57-57-8 140661-97-8 114471-18-0	EP 779284	Dependence treatment	Addiction, cocaine
$\beta$ -Propiolactone					
Bradycor					
Brain Natriuretic Peptide					
Brallobarbitol	8-Azabicyclo(3.2.1)octane-2-carboxaldehyde, 3-(3,4-dichlorophenyl)-8-methyl-, O-methylloxime, (1R-(1A)pha,2B(E),3Alpha,5Alpha))- [CAS]	561-86-4			
brasofensine					
Brequinar					
Bretylilum					
Brilliant Green					
brimonidine	6-Quinoxalinamine, 5-bromo-N-(4,5-dihydro-1H-imidazol-2-yl)- [CAS]	171655-91-7 96187-53-0 61-75-6 633-03-4	WO 9528401	Antiparkinsonian	Parkinson's disease
brinzolamide	2H-Thieno(3,2-e)-1,2-thiazine-6-sulfonamide, 4-(ethylamino)-3,4-dihydro-2-(3-methoxypropyl)-, 1,1-dioxide, (R)- [CAS]	59803-98-4	DE 2538620	Antiglaucoma	Glaucoma
brivudin	Uridine, 5-(2-bromoethenyl)-2'-deoxy, (E)- [CAS]	138890-62-7	US 5378703	Antiglaucoma	Glaucoma
Brodinoprim					
Bromazepam					
bromfenac					
Bromhexine	Benzeneacetic acid, 2-amino-3-(4-bromobenzoyl)- [CAS]	69304-47-8 56518-41-3 1812-30-2 91714-93-1 91714-94-2 3572-43-8 1146-98-1 496-67-3		Antiviral, other	Infection, varicella zoster virus
Bromindione					
Bromisovalum				Formulation, mucosal, topical	Inflammation, ocular

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Bromocriptine	1-Butanone, 4-[4-(4-bromophenyl)-4-hydroxy-1-piperidinyl]-1-(4-fluorophenyl)- [CAS]	25614-03-3	US	Neuroleptic	Psychosis, general
Bromodiphenhydramine		118-23-0			
Bromoform		75-25-2			
Bromopride		4093-35-0			
Bromosalicylchloranilide		3679-64-9			
bromperidol	4-(2-Bromoacrylamido)-N <sup>'''</sup> -(2-guanidinoethyl)-1,1',1'',1'''-tetramethyl-N,4':N',4'',N''',4'''-quater-[pyrrole-2-carboxamide] [CAS]	10457-90-6	US	Anticancer, other	Cancer, general
Brompheniramine		86-22-6			
Broparoesol		479-68-5			
Bropirimine		56741-95-8			
brostallicin					
brotizolam	6H-Thieno[3,2-f][1,2,4]triazolo[4,3-a][1,4]diazepine, 2-bromo-4-(2-chlorophenyl)-9-methyl- [CAS]	57801-81-7	US	Hypnotic/Sedative	
Brovincamine		57475-17-9			
Broxuridine		59-14-3			
Broxyquinoline		521-74-4			
Brucine		357-57-3			
$\beta$ -Sitosterol	Adenosine, N-(1-oxobutyl)-, cyclic 3',5'-(hydrogen phosphate) 2'-butanoate [CAS]	83-46-5	JP	Cardiostimulant	Wound healing
Bucetin		1083-57-4			
Bucillamine		65002-17-7			
Bucindolol		71119-11-4			
bucledesine		362-74-3			
Bucizine	9-Acridinamine, N-butyl-1,2,3,4-tetrahydro-, monohydrochloride [CAS]	82-95-1		Anaesthetic, local	
Buclosamide		575-74-6			
Bucolome		841-73-6			
bucricaine		82636-28-0			

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<b>Bucumolol</b>	Pregna-1,4-diene-3,20-dione, 16,17-[butylidenebis(oxy)]-11,21-dihydroxy-, (11 $\beta$ ,16 $\alpha$ )- [CAS]	58409-59-9	GB	Antiasthma	Asthma
budesonide	Pregna-1,4-diene-3,20-dione, 16,17-[butylidenebis(oxy)]-11,21-dihydroxy-, (11 $\beta$ ,16 $\alpha$ )- [CAS]	51333-22-3	1429922		
budesonide + formoterol	Pregna-1,4-diene-3,20-dione, 16,17-[butylidenebis(oxy)]-11,21-dihydroxy-, (11 $\beta$ ,16 $\alpha$ )- + formamide, N-[2-hydroxy-5-[1-hydroxy-2-[[2-(4-methoxyphenoxy)]-1-methylethyl]amino]ethyl]phenyl]-(R*,R*)-(±)			Formulation, fixed-dose combinations	Asthma
budipine	Piperidine, 1-(1,1-dimethylethyl)-4,4-diphenyl- [CAS]	57982-78-2 63661-61-0	DE	Antiparkinsonian	Parkinson's disease
<b>Budralazine</b>		36798-79-5			
<b>Bufeniodol</b>		22103-14-6			
<b>Bufetolol</b>		53684-49-4			
bufexamac	p-butoxyacetohydroxamic acid	2438-72-4	US	Anti-inflammatory	
bufloamedil	1-Butanone, 4-(1-pyrrolidinyl)-1-(2,4,6-trimethoxyphenyl)- [CAS]	35543-24-9 55837-25-7	GB	Vasodilator, peripheral	
<b>Buformin</b>		692-13-7			
<b>Bufuralol</b>		54340-62-4			
<b>Bumadizon</b>		3583-64-0			
bumetanide	Benzoic acid, 3-(aminosulfonyl)-5-(butylamino)-4-phenoxy- [CAS]	28395-03-1	US	Antihypertensive, diuretic	Hypertension, general
bunafine	1-Naphthalenecarboxamide, N-butyl-N-[2-(diethylamino)ethyl]- [CAS]	32421-46-8	DE	Antiarrhythmic	
<b>Bunamiodyl Sodium</b>		1923-76-8			
bunazosin	1H-1,4-Diazepine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)hexahydro-4-(1-oxobutyl)- [CAS]	52712-76-2 80755-51-7	GB	Antihypertensive, adrenergic	Hypertension, general
bunitrolol	Benzonitrile, 2-[3-[(1,1-dimethylethyl)amino]-2-hydroxypropoxy]- [CAS]	34915-68-9	US	Antihypertensive, adrenergic	
bupivacaine	2-Piperidinecarboxamide, 1-butyl-N-(2,6-dimethylphenyl)- [CAS]	38396-39-3 2180-92-9		Formulation, modified-release, >24hr	Anaesthesia
<b>Bupranolol</b>		14556-46-8			

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
buprenorphine	6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-Alpha-(1,1-dimethylethyl)-4,5-epoxy-18,19-dihydro-3-hydroxy-6-methoxy-Alpha-methyl-, [5Alpha,7Alpha(S)]- [CAS]	52485-79-7 53152-21-9 31677-93-7 34911-55-2 4663-83-6	US 3433791 US 4425363	Analgesic, other Antidepressant	Depression, general
bupropion	1-Propanone, 1-(3-chlorophenyl)-2-[(1,1-dimethylethyl)amino]-, (+/-)- [CAS]				
<b>Buramate</b>	Luteinizing hormone-releasing factor (pig), 6-[O-(1,1-dimethylethyl)-D-serine]-9-(N-ethyl-L-prolinamide)-10-deglycinamide- [CAS]	57982-77-1 68630-75-1	GB 1523623	Releasing hormones	Cancer, prostate
buserelin					
bupirone	8-Azaspiro[4.5]decane-7,9-dione, 8-[4-(2-pyrimidinyl)-1-piperazinyl]butyl- [CAS]	36505-84-7	EP 276536	Anxiolytic	Anxiety, general
busulfan	1,4-Butanediol, dimethanesulfonate [CAS]	55-98-1		Formulation, optimized, microparticles	Cancer, general Cancer, leukaemia, acute myelogenous
busulfan	1,4-Butanediol, dimethanesulfonate- [CAS]	55-98-1		Formulation, parenteral, other	
<b>Butabarbital</b>		143-81-7			
<b>Butacaine</b>		149-16-6			
<b>Butacetin</b>		2109-73-1			
<b>Butalamine</b>		22131-35-7			
<b>Butalbital</b>		77-26-9			
<b>Butallylonal</b>		1142-70-7			
butamben	4-Aminobenzoic acid butyl ester [CAS]	94-25-7		Formulation, modified-release, other	Pain, cancer
butamirate					
<b>Butanilcaine</b>	Benzeneacetic acid, Alpha-ethyl-, 2-[2-(diethylamino)ethoxy]ethylester, 2-hydroxy-1,2,3-propanetricarboxylate (1:1) [CAS]	18109-80-3 18109-81-4 3785-21-5 653-03-2 55837-14-4 16790-49-1 51395-42-7		Antitussive	Cough
<b>Butaperazine</b>					
<b>Butaverine</b>					
<b>Butazolamide</b>					
<b>Butedronic Acid</b>					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
butenafine	1-Naphthalenemethanamine, N-((4-(1,1-dimethylethyl)phenyl)methyl)-N-methyl- [CAS]	101827-46-7 101828-21-1 77-28-1	EP 164697	Antifungal	Infection, dermatological
<b>Butethal</b>		14007-64-8			
<b>Butethamate</b>		2090-89-3			
<b>Butethamine</b>		510-90-7			
<b>Buthalital</b>		2043-38-1			
<b>Buthiazide</b>		55837-18-8			
<b>Butibufen</b>		1506-12-3			
<b>Butidrine</b>					
butobendine	benzoic acid, 3,4,5-trimethoxy-, 1,2-ethanediylbis[(methylimino)(2-ethyl-2,1-ethanediyl)] ester, [S-(R*,R*)]- [CAS]	55769-64-7 55769-65-8	US 4021473	Antiarrhythmic	Arrhythmia, general
butoconazole	1H-Imidazole, 1-[4-(4-chlorophenyl)-2-[(2,6-dichlorophenyl)thio]butyl]-, (+/-)- [CAS]	64872-76-0 64872-77-1	GB 1567431	Antifungal	Infection, Candida, general
<b>Butoctamide</b>		32838-26-9			
<b>Butofilolol</b>		64552-17-6			
butorphanol	Morphinan-3,14-diol, 17-(cyclobutylmethyl)-, [S-(R*,R*)]-2,3-dihydroxybutanedioate (1:1) (salt) [CAS]	42408-82-2 58786-99-5 3772-43-8	GB 1412129	Analgesic, other	
<b>Butoxycaine</b>		35941-65-2			
<b>Butriptyline</b>		29025-14-7			
<b>Butropium</b>		3691-21-2			
<b>Buzepide</b>			WO 0208178	Anorectic/Antiobesity	Obesity
BVT-5182					
BXT-51072	2H-1,2-Benzoselenazine, 3,4-dihydro-4,4-dimethyl- [CAS] 6H-Imidazo[4,5,1-de]acridin-6-one, 5-[[2-(diethylamino)ethyl]amino]-8-hydroxy-, 2HCl, 2H <sub>2</sub> O	173026-17-0		GI inflammatory/bowel disorders	Colitis, ulcerative
C-1311	Ergoline-8-carboxamide, N-[3-(dimethylamino)propyl]-N-[[[ethylamino)carbonyl]-6-(2-propenyl)]-, (8S)- [CAS]	81409-90-7 85329-89-1	GB 2103603	Anticancer, other	Cancer, general
cabergoline				Antiprolactin	Galactorrhoea

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Cabergoline	Cadexomer iodine [CAS]	81409-90-7		Anti-infective, other	Ulcer, venostasis
Cacodylic Acid		75-60-5			
Cactinomycin		8052-16-2			
cadexomer iodine		94820-09-4			
Cadmium Salicylate		19010-79-8			
Cadralazine	1,2,3,-Propanetricarboxylic acid, 2-hydroxy- mixt. with 3,7-dihydro-1,3,7-trimethyl-1H- purine-2,6-dione [CAS]	64241-34-5		Respiratory	Apnoea
Cafaminol		30924-31-3			
caffeine		69-22-7			
Calcifediol		58-08-2			
Calcipotriene		19356-17-3			
calcipotriol	9,10-Secochola-5,7,10(19),22-tetraene- 1,3,24-triol, 24-cyclopropyl- , (1 $\alpha$ ,3 $\beta$ ,5Z,7E,22E)- [CAS]	112965-21-6	WO 8700834	Antipsoriasis	Psoriasis
calcipotriol+beclometasone	9,10-Secochola-5,7,10(19),22-tetraene- 1,3,24-triol, 24-cyclopropyl- , (1 $\alpha$ ,3 $\beta$ ,5Z,7E,22E) + Pregna-1,4- diene-3,20-dione, 9-chloro-11 $\beta$ ,17,21- trihydroxy-16 $\beta$ -methyl, 17,21-dipropionate			Formulation, fixed-dose combinations	Psoriasis
calcitriol	9,10-Secocholesta-5,7,10(19)-triene- 1,3,25-triol, (1 $\alpha$ ,3 $\beta$ ,5Z,7E)- [CAS]	32222-06-3		Antipsoriasis	Psoriasis
Calcium 3-Aurothio-2-propanol-1-sulfonate		5743-29-3			
Calcium Acetylsalicylate		69-46-5			
Calcium		33659-28-8			
Bromolactobionate		471-34-1			
Calcium Carbonate		299-28-5			
Calcium Gluconate		27214-00-2			
Calcium					
Glycerophosphate					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
calcium hopantothenate	Calcium D-(+)-4-(2,4-dihydroxy-3,3-dimethylbutyramido)butyrate (hemihydrate) [CAS]	17097-76-6 1319-91-1 1301-16-2 814-80-2 591-64-0 21085-60-9 16649-79-9	EP 117260	Neurological	Attention deficit disorder
<b>Calcium Iodobehenate</b>					
<b>Calcium Iodostearate</b>					
<b>Calcium Lactate</b>					
<b>Calcium Levulinat</b>					
<b>Calcium Mesoxalate</b>					
<b>Calcium N-Carbamoylaspartate</b>					
calcium polycarbophil	Polycarbophil, calcium salt [CAS]	126040-58-2 9003-97-8		GI inflammatory/bowel disorders	Irritable bowel syndrome
<b>Calcium Propionate</b>		4075-81-4			
<b>Calcium Succinate</b>		140-99-8			
caldaret	5-methyl-2-(1-piperaziny)-benzenesulfonic acid monohydrate	133804-44-1 17021-26-0 36104-80-0		Cardio stimulant	Heart failure
<b>Calusterone</b>					
<b>Camazepam</b>					
camostat	Benzeneacetic acid, 4-[[4-[(aminoiminomethyl)amino]benzoyloxy]-2-(dimethylamino)-2-oxoethyl ester, monomethanesulfonate [CAS]	59721-28-7 59721-29-8 71079-09-9	US 4021472	GI inflammatory/bowel disorders	Pancreatitis
<b>Camphor</b>		76-22-2			
<b>Camphotamide</b>		4876-45-3			
camptothecin	4-Ethyl-4-hydroxy-1H-pyrano-[[3'4':6,7]indolizinol[1,2-b:]quinoline-3,14(4H,12H)-dione	139481-59-7		Formulation, optimized, microemulsion	Cancer, general
<b>Candesartan</b>					
candesartan cilexetil	1H-Benzimidazole-7-carboxylic acid, 2-ethoxy-1-[[2'-(1H-tetrazol-5-yl)][1,1'-biphenyl]-4-yl]methyl]-, 1-[[[cyclohexyloxy]carbonyloxy]ethyl ester, (+/-)- [CAS]	145040-37-5 123122-55-4	EP 520423	Antihypertensive, renin system	Hypertension, general
<b>Candoxatriil</b>					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
canertinib <b>Canrenone</b> <b>Cantharidin</b>	N-[4-(3-(Chloro-4-fluoro-phenylamino)-7-(3-morpholin-4-yl-propoxy)-quinazolin-6-yl)-acrylamide	289499-45-2 976-71-6 56-25-7		Anticancer, other	Cancer, lung, non-small cell
cantuzumab mertansine	Maytansine, N2-deacetyl-N2-(3-mercapto-1-oxopropyl)-, conjugated humanized C242 monoclonal antibody	139504-50-0		Immunotoxin	Cancer, colorectal
capecitabine <b>Capobenic Acid</b>	Cytidine, 5-deoxy-5-fluoro-N-[[pentyloxy]carbonyl]- [CAS]	154361-50-9 21434-91-3	EP 602454	Anticancer, antimetabolite	Cancer, breast
capravirine <b>Capromab</b>	1H-imidazole-2-methanol, 5-(3,5-dichlorophenyl)thio-4-(1-methylethyl)-1-(4-pyridinyl)methyl carbamate (ester) [CAS]	178979-85-6 151763-64-3		Antiviral, anti-HIV	Infection, HIV/AIDS
capsaicin cream <b>Captodiamine</b>	N-[(4-hydroxy-3-methoxyphenyl)methyl]-8-methyl-, (E)- [CAS]	404-86-4 486-17-9		Formulation, dermal, topical	Pain, post-herpetic
captopril	L-Proline, 1-(3-mercapto-2-methyl-1-oxopropyl)-, (S)- [CAS] L-Proline, 1-(3-mercapto-2-methyl-1-oxopropyl)-, (S)-, mixt. with 6-chloro-3,4-dihydro-2H-1,2,4-benzothiadiazine-7-sulfonamide 1,1-dioxide [CAS]	62571-86-2 110075-07-5 5579-13-5	US 4105776 US 4217347	Antihypertensive, renin system Antihypertensive, renin system	Hypertension, general
carabersat <b>Caramiphen</b>	Benzamide, N-(6-acetyl-3,4-dihydro-3-hydroxy-2,2-dimethyl-2H-1-benzopyran-4-yl)-4-fluoro, (3R-trans)- [CAS]	184653-84-7 77-22-5	WO 9811890	Antiepileptic	Epilepsy, general
carazolol <b>Carbachol</b>	2-Propanol, 1-(9H-carbazol-4-yloxy)-3-[(1-methylethyl)amino]- [CAS] 5H-Dibenz[b,f]azepine-5-carboxamide [CAS]	57775-29-8 51-83-2	DE 2240599	Antihypertensive, adrenergic	
carbamazepine		298-46-4		Formulation, modified-release, other	Epilepsy, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Carbamide Peroxide		124-43-6			
Carbarsone		121-59-5			
Carbaryl		63-25-2			
Carbazochrome		13051-01-9			
	Methyl-2-benzimidazolecarbamate	51460-26-5			
carbendazim					
Carbenicillin		4697-36-3		Anticancer, other	Cancer, general
Carbenoxolone		5697-56-3			
Carbetapentane		77-23-6			
Carbicarb	Carbonic acid disodium salt, mixt. with monosodium salt- [CAS]	72227-05-5		Alimentary/Metabolic, other	Acidosis
Carbidopa	S-Alpha Hydrazino-3,4-dihydroxy-Alpha methyl benzene propanoic acid monohydrate +3-hydroxy-L-tyrosine	28860-95-9		Formulation, fixed-dose combinations	Parkinson's disease
carbidopa+levodopa-1					
Carbimazole		22232-54-8			
Carbinoxamine		486-16-8			
Carbocloral		541-79-7			
		151756-26-2			
carbocysteine		638-23-3	EP	Cystic fibrosis treatment	Cystic fibrosis
Carbon Tetrachloride		56-23-5			
	Platinum, diammine[1,1-cyclobutanedicarboxylato(2-)]-, (SP-4-2)- [CAS]	41575-94-4		Anticancer, alkylating	Cancer, ovarian
carboplatin		35700-23-3			
Carboprost					
	Prosta-5,13-dien-1-oic acid, 9,11,15-trihydroxy-15-methyl-, (5Z,9.alpha.,11Alpha,13E,15S)-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol(1:1) [CAS]	58551-69-2			
carboprost trometamol	2,5-Cyclohexadiene-1,4-dione, 2-[2-[(aminocarbonyl)oxy]-1-methoxyethyl]-3,6-bis(1-aziridinyl)-5-methyl- [CAS]	74849-93-7	US	Prostaglandin	Abortion
Carboquone		24279-91-2			
Carbromal		77-65-6	DE	Anticancer, antibiotic	

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Carbubarb	N-Carbamoyl-L-glutamic acid	960-05-4		Metabolic and enzyme disorders	Hyperammonaemia
Carbutamide		339-43-5			
Carbuterol		34866-47-2			
Carfimate		3567-38-2			
carglumic acid	Benzamide, N-(aminoiminomethyl)-4-(1-methylethyl)-3-(methylsulfonyl)- [CAS]	1188-38-1	EP	Antianginal	Angina, general
Cargutocin		33605-67-3			
Carindacillin		35531-88-5			
cariporide		159138-80-4			
Cariporide	1(2H)-Pyrimidinecarboxamide, 5-fluoro-N-hexyl-3,4-dihydro-2,4-dioxo- [CAS]	159138-81-5	US	Anticancer, antimetabolite	Cancer, brain
Carisoprodol		159138-80-4			
carprofen		78-44-4			
Carmoxirole		61422-45-5			
camustine	Urea, N,N'-bis(2-chloroethyl)-N-nitroso- [CAS]	98323-83-2		Formulation, implant	
Carnitine		154-93-8			
Caroverine		461-06-3			
Caroxazone		23465-76-1			
Carphenazine	9H-Carbazole-2-acetic acid, 6-chloro-Alpha-methyl-, (+/-)- [CAS]	18464-39-6	US	Anti-inflammatory	
Carpipramine		2622-30-2			
carprofen		5942-95-0			
Carsalam		53716-49-7			
carateolol	2(1H)-Quinolinone, 5-[3-[(1,1-dimethylethyl)amino]-2-hydroxypropoxy]-3,4-dihydro-, monohydrochloride [CAS]	2037-95-8	US	Antihypertensive, adrenergic	Glaucoma
Carticaine		51781-06-7			
Carubicin		51781-21-6			
Carumonam		23964-58-1			
Carvacrol	2-Propanol, 1-(9H-carbazol-4-yloxy)-3-[[2-(2-methoxyphenoxy)ethyl]amino]-[CAS]	50935-04-1	EP	Antihypertensive, adrenergic	Hypertension, general
carvedilol		87638-04-8			
		499-75-2			
		72956-09-3			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Carvone	Pneumocandin B0, 1-((4R,5S)-5-((2-aminoethyl)amino)-N2-(10,12-dimethyl-1-oxotetradecyl)-4-hydroxy-L-ornithine)-5-(threo-3-hydroxy-L-ornithine)-, diacetate (salt) [CAS]	99-49-0 10118-56-6	WO 9421677	Antifungal	Infection, Aspergillus
Caspofungin	N-(1-benzothien-2-ylcarbonyl)-N-[2-(2-fluorophenyl)-4-oxo-1,2,3,4-tetrahydropyrimidin-5-yl]-L-leucinamide	162808-62-0 179463-17-3 154-23-4	WO 9613523	Osteoporosis treatment	Osteoporosis
Catechin	N-(1-benzothien-2-ylcarbonyl)-N-[2-(2-fluorophenyl)-4-oxo-1,2,3,4-tetrahydropyrimidin-5-yl]-L-leucinamide			Antiasthma	Asthma
cathepsin K inhibitors				Immunosuppressant	Arthritis, rheumatoid
cathepsin S inhibitors				Anticancer, antibiotic	Cancer, renal
CC-401	Rapamycin 42-(3-hydroxy-2-(hydroxymethyl)-2-methylpropanoate) [CAS]	162635-04-3	US 6342595	Antiviral, anti-HIV	Infection, HIV/AIDS
CCI-779			WO 9732019	Anticancer, other	Cancer, myeloma
CCR5 antagonists			US 634061	GI inflammatory/bowel disorders	Crohn's disease
CDC-394			US 5605914	Dependence treatment	Addiction, alcohol
CDC-801			EP 347672		
CEE-03-310	1H-3-Benzazepin-7-ol, 5-(2,3-dihydro-7-benzofuranyl)- 2,3,4,5,-tetrahydro-3-methyl-8-nitro, (5S)- [CAS]	128022-68-4	EP 347672		
cefactor	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(aminophenylacetyl)amino]-3-chloro-8-oxo-, [6R-[6Alpha,7beta(R*)]]- [CAS]	53994-73-3 70356-03-5	GB 1461323	Cephalosporin, oral	Infection, Haemophilus influenzae prophylaxis
cefadroxil	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[amino(4-hydroxyphenyl)acetyl]amino]-3-methyl-8-oxo-, [6R-[6Alpha,7beta(R*)]]- [CAS]	50370-12-2 66592-87-8	GB 1240687	Cephalosporin, oral	Infection, general
cefaalexin	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(aminophenylacetyl)amino]-3-methyl-8-oxo-, [CAS]	105879-42-3 15686-71-2	US 4775751	Cephalosporin, oral	Infection, respiratory tract, upper

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
cefalexin pivoxil	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[aminophenylacetyl]amino]-3-methyl-8-oxo-, (2,2-dimethyl-1-oxopropoxy)methyl ester, monohydrochloride, [6R-[6Alpha,7Beta(R*)]]- [CAS]	27726-31-4		Cephalexosporin, oral	Infection, general
	7-D-mandelamido-3[[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-3-cephem-4-carboxylic acid	34444-01-4	US 3641021	Cephalexosporin, injectable	Infection, general
cefatrizine Cefazedone Cefazolin Cefbuperazone	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[amino(4-hydroxyphenyl)acetyl]amino]-8-oxo-3-[(1H-1,2,3-triazol-4-ylthio)methyl]-, [6R-[6Alpha,7Beta(R*)]]- [CAS]	51627-14-6 56187-47-4 25953-19-9 76610-84-9	GB 1460914	Cephalexosporin, oral	Infection, general
	7Beta-[(Z)-2-(2-amino-4-thiazolyl)-2-pentenoylamino]-3-carbamoyloxymethyl-3-cephem-4-carboxylic acid, pivaloyloxymethyl ester HCl- [CAS]	105889-45-0 105889-46-1 105239-91-6	GB 2173194	Cephalexosporin, oral	Infection, respiratory tract, general
	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-ethenyl-8-oxo-, [6R-[6Alpha,7Beta(Z)]]- [CAS]	91832-40-5	EP 105459	Cephalexosporin, oral	Infection, dermatological
	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[2-(4-methyl-5-thiazolyl)ethenyl]-8-oxo-, (2,2-dimethyl-1-oxopropoxy)methyl ester, [6R-[3(Z),6Alpha,7Beta(Z)]]- [CAS]	104145-95-1 104146-53-4 117467-28-4	JP 61178991	Cephalexosporin, oral	Infection, general
cefditoren pivoxil					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
cefepime <b>Cefetamet</b>	Pyrrrolidinium, 1-[[7-[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-1-methyl-, hydroxide, inner salt, [6R-[6Alpha,7beta(Z)]]- [CAS]	107648-80-6 123171-59-5 88040-23-7 65052-63-3	EP 531981	Cephalosporin, injectable	Infection, respiratory tract, lower
cefetamet pivoxil	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-methyl-8-oxo-, (2,2-dimethyl-1-oxopropoxy)methyl ester, monohydrochloride, [6R-[6Alpha,7beta(Z)]]- [CAS]	111696-23-2	GB 1581854	Cephalosporin, oral	Infection, general
cefixime	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)((carboxymethoxy)imino)acetyl]amino]-3-ethenyl-8-oxo-, [6R-[6Alpha,7beta(Z)]]- [CAS]	79350-37-1	EP 30630	Cephalosporin, oral	Infection, general
cefmenoxime	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo-, [6R-[6Alpha,7beta(Z)]]- [CAS]	65085-01-0 75738-58-8	GB 1536281	Cephalosporin, injectable	Infection, ocular
cefmetazole	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(cyanomethyl)thio]acetyl]amino]-7-methoxy-3-[[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo-, (6R-cis)- [CAS]	56796-20-4 56796-39-5	GB 1449420	Cephalosporin, injectable	Infection, general
cefminox	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-2-carboxyethyl)thio]acetyl]amino]-7-methoxy-3-[[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo-, [6R-[6Alpha,7Alpha,7(S*)]]- [CAS]	84305-41-9	EP 24879	Cephalosporin, injectable	Infection, urinary tract

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
cefodizime	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[5-(carboxymethyl)-4-methyl-2-thiazolyl]thio]methyl]-8-oxo-, [6R-[6Alpha,7beta(Z)]]- [CAS]	69739-16-8	US 4590267	Cephalosporin, injectable	Infection, respiratory tract, lower
		86329-79-5			
cefonicid	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(hydroxyphenylacetyl)amino]-8-oxo-3-[[[1-(sulfomethyl)-1H-tetrazol-5-yl]thio]methyl]-, disodium salt, [6R-[6Alpha,7beta(R*)]]- [CAS]	61270-78-8	GB 1547473	Cephalosporin, injectable	Infection, general
		61270-58-4			
cefoperazone cefoperazone + sulbactam Ceforanide	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(4-ethyl-2,3-dioxo-1-piperazinyl)carbonyl]amino](4-hydroxyphenyl)acetyl]amino]-3-[[[1-(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo-, [6R-[6Alpha,7beta(R*)]]- [CAS]	62893-19-0	GB 1508071	Cephalosporin, injectable	Infection, general
		92739-15-6	US 4234579		
		60925-61-3		Antibiotic, other	Infection, general
cefoselis	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-3-[[[2,3-dihydro-2-(2-hydroxyethyl)-3-imino-1H-pyrazol-1-yl]methyl]-8-oxo-, [6R-[6Alpha,7beta(Z)]]- (6R,7R)-7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]cephalsporanic acidsodium salt	122841-12-7	EP 307804	Cephalosporin, injectable	Infection, general
		122841-10-5			
cefotaxime Cefotetan	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)acetyl]amino]-3-[[[1-[2-(dimethylamino)ethyl]-1H-tetrazol-5-yl]thio]methyl]-8-oxo-, (6R-trans)- [CAS]	64485-93-4	GB 1580621	Cephalosporin, injectable	Infection, general
		63527-52-6			
cefotiam		69712-56-7			
		61622-34-2	US 4080498	Cephalosporin, injectable	Infection, general
		66309-69-1			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
cefotiam hexetil	1-(cyclohexyloxy)carbonyloxyethyl 7β-[2-(2-aminothiazol-4-yl)acetamido]-3-[[[1-(2-dimethylaminoethyl)-1H-tetrazol-5-yl]thio]methyl]ceph-3-em-4-carboxylate 2HCl [CAS]	95789-30-3	EP 128029	Cephalosporin, oral	Infection, respiratory tract, lower
	5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((aminocarbonyloxy)methyl)-7-methoxy-8-oxo-7-((2-thienylacetyl)amino)-, monosodium salt, (6R-cis)- [CAS]	33564-30-6 35607-66-0	GB 1348984	Cephalosporin, oral	Infection, general
cefazopran	Imidazo[1,2-b]pyridazinium, 1-[[7-[[[(5-amino-1,2,4-thiadiazol-3-yl)(methoxyimino)acetyl]amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-, hydroxide, inner salt, [6R-[6Alpha,7β(Z)]]- [CAS]	113359-04-9	EP 203271	Cephalosporin, injectable	Infection, general
cefimizole	Pyridinium, 1-[[[2-carboxy-7-[[[(5-carboxy-1H-imidazol-4-yl)carbonyl]amino]phenylacetyl]amino]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-4-(2-sulfoethyl)-, hydroxide, inner salt, [6R-[6Alpha,7β(R*)]]- [CAS]	84880-03-5 85287-61-2	EP 60028	Cephalosporin, injectable	Infection, respiratory tract, general
	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(4-hydroxy-6-methyl-3-pyridinyl)carbonyl]amino][4-hydroxyphenyl)acetyl]amino]-3-[[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo-, [6R-[6Alpha,7β(R*)]]- [CAS]	70797-11-4	US 4156724	Cephalosporin, injectable	Infection, general
cefpiramide	5H-1-Pyridinium, 1-[[7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-6,7-dihydro-, hydroxide, inner salt, [6R-[6Alpha,7β(Z)]]- [CAS]	84957-29-9 98753-19-6 87239-81-4	EP 64740	Cephalosporin, injectable	Infection, respiratory tract, lower
Cefpodoxime Proxetil					

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cefprozil	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[amino(4-hydroxyphenyl)acetyl]amino]-8-oxo-3-(1-propenyl)-, [6R-[6Alpha,7β(R*)]]- [CAS]	92665-29-7 121123-17-9	GB 2173798	Cephalosporin, oral	Infection, dermatological
	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(amino-1,4-cyclohexadien-1-ylacetyl)amino]-3-methoxy-8-oxo-, [6R-[6Alpha,7β(R*)]]-[CAS]	51762-05-1			
cefroxadine	Pyridinium, 4-(aminocarbonyl)-1-[[2-carboxy-8-oxo-7-[(phenylsulfoacetyl)amino]-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-, hydroxide, inner salt, [6R-[6Alpha,7β(R*)]]-[CAS]	52152-93-9 62587-73-9	GB 1387656	Cephalosporin, injectable	Infection, pseudomonal
	Pyridinium, 1-[[7-[[[(2-amino-4-thiazolyl)](1-carboxy-1-methylethoxy)imino]acetyl]amino]-2-carboxy-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-en-3-yl]methyl]-, hydroxide, inner salt, [6R-[6Alpha,7β(Z)]]-[CAS]	72558-82-8 82547-58-8 26973-24-0			
ceftazidime <b>Ceftoram</b> <b>Ceftezole</b>	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[2-(2-amino-4-thiazolyl)-4-carboxy-1-oxo-2-butenyl]amino]-8-oxo-, [6R-[6Alpha,7β(Z)]]- [CAS]	97519-39-6	EP 136721	Cephalosporin, oral	Infection, respiratory tract, lower
	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2-amino-4-thiazolyl)(methoxyimino)acetyl]amino]-8-oxo-, [6R-[6Alpha,7β(Z)]]- [CAS]	68401-81-0 68401-82-1			
ceftizoxime			GB 1600735	Cephalosporin, injectable	Infection, general

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ceftizoxime alapivoxil	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[2-[(2-amino-1-oxopropyl)amino]-4-thiazolyl]](methoxyimino)acetyl]amino]-8-oxo-, (2,2-dimethyl-1-oxopropoxy)methyl ester, monohydrochloride, [6R-[6Alpha,7Beta(Z,S*)]]- [CAS]	113812-94-5 135767-36-1	JP 62209112	Cephalosporin, oral	Infection, general
	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[2-amino-4-thiazolyl]](methoxyimino)acetyl]amino]-8-oxo-3-[[[1,2,5,6-tetrahydro-2-methyl-5,6-dioxo-1,2,4-triazin-3-yl]thio]methyl]-, [6R-[6Alpha,7Beta(Z)]]- [CAS]	73384-59-5 74578-69-1	GB 2022090	Cephalosporin, injectable	Infection, respiratory tract, lower
ceftriaxone	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(aminocarbonyloxy)methyl]-7-[[2-furanyl(methoxyimino)acetyl]amino]-8-oxo-, 1-(acetyloxy)ethyl ester, [6R-[6Alpha,7Beta(Z)]]- [CAS]	15686-71-2 64544-07-6	GB 1571683	Cephalosporin, oral	Infection, respiratory tract, upper
cefuroxime axetil	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[[[(aminocarbonyloxy)methyl]-7-[[2-furanyl(methoxyimino)acetyl]amino]-8-oxo-, [6R-[6Alpha,7Beta(Z)]]- [CAS]	55268-75-2 56238-63-2 82219-78-1	GB 1453049	Cephalosporin, injectable	Infection, general
cefeuroxime	Benzenesulfonamide, 4-(5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl)- [CAS]	169590-42-5	US 5760068	Antiarthritic, other	Arthritis, rheumatoid
celecoxib	Butanoic acid, octahydro-1,7,8-trihydroxy-6-indoliziny ester, [1S-(1Alpha,6Beta,7Alpha,8Beta,8aBeta)]- [CAS]	121104-96-9	US 5017563	Antiviral, other	Infection, hepatitis virus, general
celgosivir	Urea, N'-[3-acetyl-4-[3-[(1,1-dimethylethyl)amino]-2-hydroxypropoxy]phenyl]-N,N-diethyl- [CAS]	56980-93-9 57470-78-7 9004-58-4	GB 1441359	Antihypertensive, adrenergic	Angina, unstable
Cellulose Ethyl Hydroxyethyl Ether					

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Centchroman	9,12-Epoxy-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-ij][1,6]benzodiazocine-10-carboxylic acid, 5,16-bis((ethylthio)methyl)-2,3,9,10,11,12-hexahydro-10-hydroxy-9-methyl-1-oxo-, methyl ester, (9S,10R,12R)-[CAS]	31477-60-8			
	9,12-Epoxy-1H-diindolo[1,2,3-fg:3',2',1'-kl]pyrrolo[3,4-ij][1,6]benzodiazocin-1-one, 2,3,9,10,11,12-hexahydro-10-hydroxy-10-(hydroxymethyl)-9-methyl-, (9S,10S,12R)-[CAS]	156177-65-0	WO 9731002	Antiparkinsonian	Parkinson's disease
CEP-1347					
CEP-701		111358-88-4			
Cephacetrile		23239-41-0			
Cephaeline		483-17-0			
Cephalexin		15686-71-2			
Cephaloglycin		3577-1-3			
Cephaloridine		50-59-9			
Cephalosporin C		61-24-5			
Cephalothin		153-61-7			
Cephapirin		24356-60-3			
Cephradine		38821-53-3			
Cerivastatin		145599-86-6			
Ceronapril		111223-26-8			
certoparin	Heparin [CAS]	9005-49-6		Anticoagulant	Thrombosis, venous
Ceruletide		17650-98-5			
Cerviprost	Prosta-5,13-dien-1-oic acid, 11,15-dihydroxy-9-oxo-, (5Z,11Alpha,13E,-15S)-[CAS]	363-24-6			
Cetalkonium		122-18-9			
Cetamolol		34919-98-7		Formulation, dermal, topical	
Cethexonium		1794-74-7			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
cethromycin <b>Cetiedil</b> <b>Cetirizine</b>	2H-Oxacyclotetradecino(4,3-d)oxazole-2,6,8,14(1H,7H,9H)-tetrone 4-ethyloctahydro-3a,7,9,11,13,15-hexamethyl-11-((3-(3-quinolinyl)-2-propenyl)oxy)-10-((3,4,6-trideoxy-3-(dimethylamino)-β-D-xylohexapyranosyl)oxy)-(3a S,4R,7R,9R,10R,11R,13R,15R,15aR)-[CAS]	205110-48-1	EP 929563	Macrolide antibiotic	Infection, respiratory tract, general
		14176-10-4			
		83881-51-0			
cetirizine	Acetic acid, [2-[4-((4-chlorophenyl)phenylmethyl)-1-piperazinyl]ethoxy]-, [CAS]	83881-51-0	EP 58146	Antiallergic, non-asthma	Allergy, general
		83881-52-1			
cetirizine+pseudoephedrine <b>Cetotiamine</b> <b>Cetoxime</b>	Acetic acid, [2-[4-((4-chlorophenyl)phenylmethyl)-1-piperazinyl]ethoxy]-, dihydrochloride, Benzenemethanol, Alpha-[1-(methylamino)ethyl]-, hydrochloride, [S-(R*R*)]-	83881-52-1		Formulation, optimized, microencapsulate	Allergy, general
		90-82-4			
		137-76-8			
		25394-78-9			
cetaxate <b>Cetrimonium</b> <b>Cetrorelix</b> <b>Cetyldimethylethylamm onium</b> <b>Cetylpyridinium</b>	Benzenepropanoic acid, 4-[[[4-(aminomethyl)cyclohexyl]carbonyl]oxy]-, trans-[CAS]	27724-96-5	JP 48075547	Antiulcer	
		34675-84-8			
		57-09-0			
		120287-85-6			
cevimeline <b>CG-1521</b> <b>Chaulmoogric Acid</b> <b>Chenodiol</b>	Spiro[1-azabicyclo[2.2.2]octane-3,5'-[1,3]oxathiolane], 2'-methyl-, cis- [CAS] 7-phenyl-2,4,6-heptatrienoylhydroxamic acid	124-03-8	EP 205247	Stomatological	Sjogren's syndrome
		123-03-5			
		107220-27-9			
		107233-08-9		Anticancer, other	Cancer, general
		29106-32-9			
		474-25-9			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
CHF-3381	1,1-Ethanediol, 2,2,2-trichloro- [CAS]	791-35-5	EP 951465	Analgesic, other	Pain, neuropathic
Chlophedianol		800-22-6			
Chloracizine		302-17-0			
		2218-68-0			
chloral		515-82-2			
Chlorambucil		305-03-3		Formulation, transmucosal, systemic	Insomnia
Chloramine-B		127-52-6			
Chloramine-T		127-65-1			
Chloraminophenamide		121-30-2			
		56-75-7			
Chloramphenicol		500-42-5			
Chlorazanol		522-18-9			
Chlorbenzoxamine		97-27-8			
Chlorbetamide		82-93-9			
Chlorcyclizine	5588-20-5				
Chlordantoin	58-25-3				
Chlordiazepoxide	500-92-5				
Chlorguanide	3563-58-4				
Chlorhexadol					
chlorhexidine	2,4,11,13-Tetraazatetradecanediiimide, N,N'-bis(4-chlorophenyl)-3,12-diimino- [CAS]	55-56-1		Formulation, other	Xerostomia, Periodontitis
Chlorisondamine		69-27-2			
Chlormadinone		302-22-7			
Chlormerodrin		62-37-3			
Chlormezanone		80-77-3			
Chlormidazole		3689-76-7			
Chlornaphazine		494-03-1			
Chloroazodin		502-98-7			
Chlorophyll		1406-65-1			
Chloroprednisone		52080-57-6			
Chloroprocaine		3858-89-7			
Chloropyramine		59-32-5			

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Chloroquine	2-Pyridinepropanamine, Gamma-(4-chlorophenyl)-N,N-dimethyl- [CAS]	54-05-7		Formulation, modified-release, other	Allergy, general
Chlorothen		148-65-2			
Chlorothiazide		58-94-6			
Chlorotrianisene		569-57-3			
Chloroxine		773-76-2			
Chloroxyleneol		88-04-0			
Chlorozotocin		54749-90-5			
chlorphenamine		132-22-9			
Chlorphenesin		104-29-0			
		886-74-8			
Chlorpheniramine	4,4'-Sulfonyldianiline + 1-(3,4-Dichlorophenyl)5-isopropylbiguanide	132-22-9		Antimalarial	Infection, malaria
Chlorphenoxamide		3576-64-5			
Chlorphenoxamine		77-38-3			
Chlorphentermine		461-78-9			
Chlorproethazine		84-01-5			
Chlorproguanil		537-21-3			
chlorproguanil + dapson		537-21-3			
Chlorpromazine		80-08-0			
Chlorpropamide		50-53-3			
Chlorprothixene		94-20-2			
Chlorquinaldol		113-59-7			
Chlortetracycline		72-80-0			
Chlorthalidone		57-62-5			
Chlorthenoxazin(e)		77-36-1			
Chlorzoxazone		132-89-8			
Cholic Acid		95-25-0			
Choline		81-25-4			
		67-48-1			
		2016-36-6			
		28319-77-9			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
choline theophyllinate	Ethanaminium, 2-hydroxy-N,N,N-trimethyl-, salt with 3,7-dihydro-1,3-dimethyl-1H-purine-2,6-dione (1:1) [CAS]	4499-40-5		Formulation, modified-release, other	
	Ethanaminium, 2-[[[(2,3-dihydroxypropoxy)hydroxyphosphinyl]oxy]-N,N,N-trimethyl-, hydroxide, inner salt, (R)-] [CAS]	28319-77-9	JP 55028955	Cognition enhancer	Amnesia
		4940-39-0			
choline-L-alfoscerate		804-10-4			
<b>Chromocarb</b>		532-82-1			
<b>Chromonar</b>					
<b>Chrysoidine</b>					
CHS-828	Guanidine, N-[6-(4-chlorophenoxy)hexyl]-N'-cyano-N"-4-pyridinyl- [CAS]	200484-11-3	US 5696140	Anticancer, other	Cancer, general
CI-1031	Glycine, N-[2-[5-(aminiminomethyl)-2-hydroxyphenoxy]-6-[3-(4,5-dihydro-1-methyl-1H-imidazol-2-yl)phenoxy]-3,5-difluoro-4-pyridinyl]-N-methyl- [CAS]	183305-24-0	WO 9638421	Antianginal	Angina, unstable
CI-1040	Benzamide, 2-[(2-chloro-4-iodophenyl)amino]-N-(cyclopropylmethoxy)-3,4-difluoro- [CAS]	212631-79-3	WO 9837881	Anticancer, other	Cancer, general
cibenzoline	1H-Imidazole, 2-(2,2-diphenylcyclopropyl)-4,5-dihydro- [CAS]	53267-01-9	GB 1417174	Antiarrhythmic	Arrhythmia, general
ciclesonide	Pregna-1,4-diene-3,20-dione 16,17-((cyclohexylmethylene)bis(oxy))-11-hydroxy-21-(2-methyl-1-oxopropoxy) (11β, 16Alpha) [CAS]	126544-47-6	DE 4129535	Antiasthma	Asthma
cicletanine	Furo[3,4-c]pyridin-7-ol, 3-(4-chlorophenyl)-1,3-dihydro-6-methyl-, (+/-)- [CAS]	82747-56-6		Antihypertensive, other	
ciclonicate	3-Pyridinecarboxylic acid, 3,3,5-trimethylcyclohexyl ester, trans- [CAS]	89943-82-8	US 4383998	Vasodilator, peripheral	Cancer, lung, small cell
ciclopirox	2(1H)-Pyridinone, 6-cyclohexyl-1-hydroxy-4-methyl-, [CAS]	53449-58-4	DE 1910481	Antifungal	Infection, fungal, general
<b>Ciclosidomine</b>		41621-49-2			
		29342-05-0	US 3883545		
		66564-16-7			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
ciclosporin A	Cyclosporin A- [CAS]	59865-13-3		Formulation, optimized, microemulsion	Transplant rejection, general
cidofovir	Phosphonic acid, [[2-(4-amino-2-oxo-1(2H)-pyrimidinyl)-1-(hydroxymethyl)ethoxy]methyl]-, (S)- [CAS]	113852-37-2	EP 253412	Antiviral, other	Infection, cytomegalovirus
<b>Cifenline</b>		53267-01-9			
cilansetron	4H-Pyrido[3,2,1-k]carbazol-11(8H)-one, 5,6,9,10-tetrahydro-10-[(2-methyl-1H-imidazol-1-yl)methyl]-, (R)- [CAS]	120635-74-7	EP 297651	GI inflammatory/bowel disorders	Irritable bowel syndrome
<b>Cilastatin</b>		82009-34-5			
cilazapril	6H-Pyridazino[1,2-a][1,2]diazepine-1-carboxylic acid, 9-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]octahydro-10-oxo-, [1S-[1Alpha,9Alpha(R*)]]- [CAS]	88768-40-5 90139-06-3	GB 2128984	Antihypertensive, renin system	Hypertension, general
cilengitide	Cyclo(L-arginylglycyl-L-Alpha-aspartyl-D-phenylalanyl-N-methyl-L-valyl) [CAS]	188968-51-6	EP 770622	Anticancer, other	Cancer, lung, non-small cell
clindipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, 2-methoxyethyl 3-phenyl-2-propenyl ester- [CAS]	102106-21-8 132203-70-4	EP 161877	Antihypertensive, other	Hypertension, general
clomilast	Cis-4-cyano-4-[3-(cyclopentyloxy)-4-methoxyphenyl]cyclohexane-1-carboxylic acid	153259-65-5	US 5602157	COPD treatment	Chronic obstructive pulmonary disease
cilostazol	2(1H)-Quinolinone, 6-[4-(1-cyclohexyl-1H-tetrazol-5-yl)butoxy]-3,4-dihydro-[CAS]	73963-72-1	GB 2033893	Antithrombotic	Peripheral vascular disease
<b>Cimetidine</b>		51481-61-9			
cimetropium	3-Oxa-9-azoniatricyclo[3.3.3.1.02,4]nonane, 9-(cyclopropylmethyl)-7-(3-hydroxy-1-oxo-2-phenylpropoxy)-9-methyl-, [7(S)-(1Alpha,2Beta,4Beta,5Alpha,7Beta)]-[CAS]	51598-60-8	US 3853886	Antispasmodic	Muscle spasm, general
cinacalcet	1-naphthalenemethanamine, Alpha-methyl-N-{3-[3-(trifluoromethyl)phenyl]propyl]-, (AlphaR)-	364782-34-3		Hormone	Hyperparathyroidism

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Cinchonidine	Piperazine, 1-[2-oxo-2-(1-pyrrolidinyl)ethyl]-4-[1-oxo-3-(3,4,5-trimethoxyphenyl)-2-propenyl]-, (Z)-2-butenedioate (1:1) [CAS]	485-71-2	GB	Vasodilator, peripheral	Peripheral vascular disease
Cinchonine		118-10-5			
Cinchophen		132-60-5			
Cinepazet		23887-41-4			
Cinepazide		23887-46-9			
cinepazide		26328-04-1			
Cinitapride		66564-14-5			
Cinmetacin		20168-99-4			
Cinnamedrine		90-86-8			
Cinnarizine		298-57-7			
cinolazepam	1H-1,4-Benzodiazepine-1-propanenitrile, 7-chloro-5-(2-fluorophenyl)-2,3-dihydro-3-hydroxy-2-oxo- [CAS]	75696-02-5	DE	Hypnotic/Sedative	Insomnia
cinoxacin	[1,3]Dioxolo[4,5-g]cinnoline-3-carboxylic acid, 1-ethyl-1,4-dihydro-4-oxo-[CAS]	28657-80-9	GB	Quinolone antibacterial	Infection, urinary tract
Cinoxate		104-28-9			
Cinromide		58473-74-8			
Cioteronel		89672-11-7			
cipamfylline	1H-Purine-2,6-dione, 8-amino-1,3-bis(cyclopropylmethyl)-3,7-dihydro- [CAS]	132210-43-6	EP	Antipruritic/inflamm, allergic	Eczema, atopic
cipralisant	1H-Imidazole, 4-[(1R,2R)-2-(5,5-dimethyl-1-hexynyl)cyclopropyl]- [CAS]	213027-19-1	US	Psychostimulant	Attention deficit disorder
ciprofibrate	Propanoic acid, 2-[4-(2,2-dichlorocyclopropyl)phenoxy]-2-methyl-[CAS]	52214-84-3	GB	Hypolipaemic/Antiatherosclerosis	Hyperlipidaemia, general
ciprofloxacin	3-Quinolincarboxylic acid, 1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)-[CAS]	85721-33-1	US	Quinolone antibacterial	Infection, general



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
ciprofloxacin+fluocinolone,SAL <b>Ciramadol</b>	3-Quinolincarboxylic acid, 1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)- + (6Alpha, 11Beta, 16Alpha)-6,9-Difluoro-11,21-dihydroxy-16,17-[(1-methylethylidene)bis-(oxy)]-pregna-1,4-diene-3,20-dione	63269-31-8		Formulation, fixed-dose combinations	Otitis
	Benzamide, 4-amino-5-chloro-N-[1-[3-(4-fluorophenoxy)propyl]-3-methoxy-4-piperidinyl]-2-methoxy-, cis- [CAS]	81098-60-4	EP 76530	Gastroprokinetic	
cisapride	Isoquinolinium, 2,2'-[1,5-pentanediy]bis[oxy(3-oxo-3,1-propanediyl))]bis[1-[(3,4-dimethoxyphenyl)methyl]]-1,2,3,4-tetrahydro-6,7-dimethoxy-2-methyl-, [1R-[1Alpha,2Alpha(1'R*,2'R*)]]-, [CAS]	96946-42-8	US 5453510	Muscle relaxant	Surgery adjunct
cisatracurium	Platinum, diamminedichloro-, (SP-4-2)-[CAS]	15663-27-1	US 4177263	Anticancer, alkylating	
cisplatin	5-Isobenzofurancarbonitrile, 1-[3-(dimethylamino)propyl]-1-(4-fluorophenyl)-1,3-dihydro- [CAS]	59729-32-7 59729-33-8	GB 1526331	Antidepressant	Depression, general
citaplopram	Cytidine 5'-(trihydrogen diphosphate), P'-[2-(trimethylammonio)ethyl]ester, hydroxide, inner salt [CAS]	987-78-0	JP 39006541	Cognition enhancer	Infarction, cerebral
citicoline		1195-16-0			
<b>Cititolone</b>		77-92-9			
<b>Citric Acid</b>		372-75-8			
<b>Citrulline</b>					
cizolirine	Ethanamine, N,N-dimethyl-2-[(1-methyl-1H-pyrazol-5-yl)phenylmethoxy]-, 2-hydroxy-1,2,3-propanetricarboxylate [CAS]	142155-44-0		Urological	Incontinence
	4-(3-[4-(2-Methyl-imidazol-1-yl)-phenylsulfanyl]-phenyl)-tetrahydro-pyran-4-carboxylic acid amide			COPD treatment	Chronic obstructive pulmonary disease
CJ-13610					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
CKD-602	1H-Pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione, 4-ethyl-4-hydroxy-11-[2-[(1-methylethyl)amino]ethyl]-, monohydrochloride, (4S)- [CAS]	213819-48-8	WO 9902530	Anticancer, other	Cancer, ovarian
cladribine	Adenosine, 2-chloro-2'-deoxy- [CAS]	4291-63-8	EP 173059	Anticancer, antimetabolite	Cancer, leukaemia, hairy cell
<b>Clanobutin</b>		30544-61-7			
clarithromycin	Erythromycin, 6-O-methyl- [CAS]	81103-11-9	EP 41355	Macrolide antibiotic	Infection, respiratory tract, lower
<i>Clavulanate, Disodium</i>					
<b>Clavulanic Acid</b>		58001-44-8			
<b>Clebopride</b>		55905-53-8			
<b>Clemastine</b>		15686-51-8			
<b>Clemizole</b>		442-52-4			
<b>Clenbuterol</b>		37148-27-9			
<b>Cientiazem</b>		96125-53-0			
clevidipine	3,5-Pyridinedicarboxylic acid, 4-(2,3-dichlorophenyl)-1,4-dihydro-2,6-dimethyl-, methyl (1-oxobutoxy)methyl ester (±) [CAS]	167221-71-8	WO 9512578	Antihypertensive, other	Hypertension, general
clevudine	2,4(1H,3H)-Pyrimidinedione, 1-(2-deoxy-2-fluoro-β-L-arabinofuranosyl)-5-methyl- [CAS]	163252-36-6	-	Antiviral, other	Infection, hepatitis-B virus
<b>Clidanac</b>		28968-07-2			
<b>Clidinium</b>		3485-62-9			
<b>Clinafloxacin</b>		105956-97-6			
<b>Clindamycin</b>		18323-44-9			
clindamycin + tretinoin	L-threo-Alpha-D-galacto-Octopyranoside, methyl 7-chloro-6,7,8-trideoxy-6-[[[(1-methyl-4-propyl-2-pyrrolidiny)carbonyl]amino]-1-thio-, (2S-trans)- + retinoic acid			Formulation, fixed-dose combinations	Acne

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clindamycin	L-Threo-Alpha-D-galacto-octopyranoside, methyl 7-chloro-6,7,8-trideoxy-6-[[[(1-methyl-4-propyl-2-pyrrolidiny)carbonyl]amino]-1-thio-, 2-(dihydrogen phosphate), (2S-trans)-	18323-44-9 24729-96-2		Formulation, parenteral, other	Infection, gynaecological
Clinofibrate		30299-08-2			
Clinprost		88931-51-5			
clobazam	1H-1,5-Benzodiazepine-2,4(3H,5H)-dione, 7-chloro-1-methyl-5-phenyl- [CAS]	22316-47-8	GB 1214662	Anxiolytic	
Clobenfurol		3611-72-1			
Clobenoside		29899-95-4			
Clobenzepam		1159-93-9			
Clobenzorex		13364-32-4			
Clobenztropine		5627-46-3			
clobetasol	Pregna-1,4-diene-3,20-dione, 21-chloro-9-fluoro-11,17-dihydroxy-16-methyl-, (11 $\beta$ ,16 $\beta$ )- [CAS]	25122-41-2		Formulation, dermal, topical	Psoriasis
clobetasone	Pregna-1,4-diene-3,11,20-trione, 21-chloro-9-fluoro-16-methyl-17-(1-oxobutoxy)-, (16 $\beta$ )- [CAS]	25122-57-0 54063-32-0	GB 1253831	Antipruritic/inflamm, allergic	
Clobutinol		14860-49-2			
Clocapramine		47739-98-0			
Clocinazine		298-55-5			
Cloconazole		77175-51-0			
Clocortolone		4828-27-7			
clodronate	Phosphonic acid, (dichloromethylene)bis- [CAS]	22560-50-5		Osteoporosis treatment, Anticancer, hormonal	Pain, cancer, Hypercalcaemia of malignancy
Clodronic Acid	2-chloro-9-(2-deoxy-2-fluoro- $\beta$ -D-arabinofurasonyl)adenine	10596-23-3		Anticancer, antimetabolite	Cancer, leukaemia, chronic lymphocytic
clofarabine					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
clofazimine	3-(p-chloroanilo)-10-(p-chlorophenyl)-2,10-dihydro-2-(isopropylimino)-phenazine	2030-63-9		Formulation, optimized, microencapsulate	Infection, tuberculosis
<b>Clofenamide</b>		671-95-4			
<b>Clofibrate</b>		637-07-0			
<b>Clofibric Acid</b>		882-09-7			
<b>Cloflucarban</b>		369-77-7			
<b>Clofoctol</b>		37693-01-9			
<b>Cloforex</b>		14261-75-7			
<b>Clomacran</b>		5310-55-4			
<b>Clomestrone</b>		4091-75-2			
<b>Clometacin</b>		25803-14-9			
<b>Clomethiazole</b>		533-45-9			
<b>Clometocillin</b>		1926-49-4			
<b>Clomiphene</b>		911-45-5			
<b>Clomipramine</b>		303-49-1			
<b>Clomocycline</b>		1181-54-0			
clonazepam	2H-1,4-Benzodiazepin-2-one, 5-(2-chlorophenyl)-1,3-dihydro-7-nitro- [CAS]	1622-61-3	US 4316897	Antiepileptic	Epilepsy, general
clonidine	1H-Imidazol-2-amine, N-(2,6-dichlorophenyl)-4,5-dihydro- [CAS]	4205-90-7	US 4060084	Formulation, transdermal, patch	Hypertension, general
<b>Clonitazene</b>		3861-76-5			
<b>Clonitrate</b>		2612-33-1			
<b>Clonixin</b>		17737-65-4			
<b>Clopamide</b>		636-54-4			
<b>Clopenthixol</b>		982-24-1			
<b>Cloperastine</b>		3703-76-2			
	Thieno[3,2-c]pyridine-5(4H)-acetic acid, Alpha-(2-chlorophenyl)-6,7-dihydro-, methyl ester, (S)- [CAS]	120202-48-4			
clopidogrel		90055-48-4			
<b>Clopirac</b>		113665-84-2	EP 99802	Antithrombotic	Infarction, myocardial
<b>Cloprednol</b>		42779-82-8			
	2-Propanol, 1-(2,5-dichlorophenoxy)-3-[[1,1-dimethylethyl)amino]- [CAS]	5251-34-3			
		39563-28-5			
cloranolol		54247-25-5	US 4310549	Antihypertensive, adrenergic	

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Clorazepic Acid	Acetic acid, [[8-chloro-3-[2-(diethylamino)ethyl]-4-methyl-2-oxo-2H-1-benzopyran-7-yl]oxy]-, ethyl ester [CAS]	23887-31-2 2127-17	US 4349566	Vasodilator, coronary	Peripheral vascular disease
cloricromene		68206-94-0			
Clorindione		1146-99-2			
Clorprenaline		3811-25-4			
Clortermine		10389-73-8			
Clospirazine		24527-27-3			
Clostebol		1093-58-9			
Clothiapine		2058-52-8			
clotiazepam	2H-Thieno[2,3-e]-1,4-diazepin-2-one, 5-(2-chlorophenyl)-7-ethyl-1,3-dihydro-1-methyl- [CAS]	33671-46-4	US 3849405	Anxiolytic	Anxiety, general
clotrimazole	1-[(2-chlorophenyl)diphenylmethyl]-1H-imidazole	23593-75-1	US 3705172	Antifungal	
clotrimazole + betamethasone	Pregna-1,4-diene-3,20-dione, 9-fluoro-11-hydroxy-16-methyl-17,21-bis(1-oxopropoxy)-, (11 $\beta$ ,16 $\beta$ )-, mixt. with 1-[(2-chlorophenyl)diphenylmethyl]-1H-imidazole [CAS]	92522-91-3 61-72-3		Formulation, fixed-dose combinations	Infection, fungal, general
Cloxacillin	Oxazolo[3,2-d][1,4]benzodiazepin-6(5H)-one, 10-chloro-11b-(2-chlorophenyl)-2,3,7,11b-tetrahydro- [CAS]	24166-13-0	US 3772371	Anxiolytic	
cloxazolam		53608-96-1			
Cloxotestosterone		130-16-5			
Cloxyquin		5786-21-0	US 3539573	Neuroleptic	Schizophrenia
clozapine	5H-Dibenzo[b,e][1,4]diazepine, 8-chloro-11-(4-methyl-1-piperazinyl)- [CAS]				
	Trans-2-[3-methoxy-4-(2-p-chlorophenylthio)ethoxy-5-(N'-methyl-N'-hydroxyureidyl)methylphenyl]-5-(3,4,5-trimethoxyphenyl)tetrahydrofuran				
CMI-392		193739-23-0	US 5648486	Antipsoriasis	Psoriasis

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
CMT-3	2-Naphthacene-carboxamide, 1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-, (4aS,5aR,12aS)- [CAS]	15866-90-7	US 5837696	Anticancer, other	Cancer, sarcoma, Kaposi's
CNI-1493	Decanediarnide, N,N'-bis[3,5-bis[(1-[(aminoiminomethyl)hydrazono]ethyl]phenyl]-, tetrahydrochloride [CAS]	164301-51-3	US 5750573	Anti-inflammatory	Psoriasis
CNS-5161	N'-[2-chloro-5-(methylthio)phenyl]-N-methyl-N-[3-(methylthio)phenyl]guanidine [CAS]	160754-76-7	WO 9427591	Analgesic, other	Pain, neuropathic
Cobamamide	5,10 methylene - tetrahydrofolate	13870-90-1			
Cocaeethylene		529-38-4			
Cocaine		50-36-2			
Codeine		76-57-3			
		52-28-8			
CoFactor		64-86-8		Anticancer, antimetabolite	Cancer, colorectal
Colchicine	1-Hexanaminium, N,N,N-trimethyl-6-(2-propenylamino)-, polymer with (chloromethyl)oxirane, 2-propen-1-amine and N-2-propenyl-1-decanamine, hydrochloride [CAS]	182815-44-7	US 5607669	Hypolipaeimic/Antiatherosclerosis	Hyperlipidaemia, general
colesevelam	1H-Imidazole, 2-methyl-, polymer with (chloromethyl)oxirane [CAS]	95522-45-5	JP 59155421	Hypolipaeimic/Antiatherosclerosis	Hypercholesterolaemia
colestilan		26658-42-4			
Colestipol	6-(3-dimethylaminopropionyl)forskolin-[CAS]	138605-00-2	EP 222413	Cardio stimulant	Heart failure
colforsin daropate					
colfosceril	3,5,9-Trioxa-4-phosphapentacosan-1-aminium, 4-hydroxy-N,N,N-trimethyl-10-oxo-7-[(1-oxohexadecyl)oxy]-, hydroxide, inner salt, 4-oxide, (R)- [CAS]	63-89-8			Respiratory distress syndrome, infant
Collagraft		99732-49-7	US 4826821	Lung Surfactant	Regeneration, bone
Colocynthin		138331-02-9		Formulation, implant	
Colpormon		1398-78-3			
		1247-71-8			



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
coluracetam	1-Pyrrolidineacetamide, 2-oxo-N-(5,6,7,8-tetrahydro-2,3-dimethylfuro[2,3-b]quinolin-4-yl)- [CAS]	135463-81-9	EP 427636	Cognition enhancer	Alzheimer's disease
combretastatin A-4 prodrug compound B, Pharmacor	disodium combretastatin-A-4-3-O-phosphate				
conivaptin	[1,1'-Biphenyl]-2-carboxamide, N-[4-[(4,5-dihydro-2-methylimidazo[4,5-d][1-benzazepin-6(1H)-yl)carbonyl]phenyl]-, [CAS]	168626-94-6			
Connettivina	Hyaluronic acid [CAS]	9004-61-9	WO 9503305	GI inflammatory/bowel disorders	Hyponatraemia
<b>Convallatoxin</b>		508-75-8			
<b>Coparaffinate</b>		8001-60-3			
<i>Corticoirelin</i> <i>Ovine</i>					
<i>Triflutate</i>					
<b>Corticosterone</b>		50-22-6			
<b>Cortisone</b>		53-06-5			
<b>Cortivazol</b>		1110-40-3			
<b>Cosyntropin</b>		16960-16-0			
<b>Cotarnine</b>		82-54-2			
<b>Cotinine</b>		486-56-6			
co-trimazine	Benzenesulfonamide, 4-amino-N-2-pyrimidinyl-, mixt. with 5-[(3,4,5-trimethoxyphenyl)methyl]-2,4-pyrimidinediamine [CAS]	39474-58-3		Trimethoprim and analogues	Infection, urinary tract
<b>Coumetarol</b>		4366-18-1			
CP-248	1H-Indene-3-acetamide, 5-fluoro-2-methyl-N-(phenylmethyl)-1-[(3,4,5-trimethoxyphenyl)methylene]-, (1Z)-[CAS]				
CP-461		200803-37-8	WO 9747303 US 5948779	Anticancer, other Anticancer, other	Barrett's oesophagus Cancer, prostate
CPC-211	Acetic acid, dichloro-, sodium salt [CAS]	2156-56-1		Neuroprotective	Acidosis, lactic
CPI-1189	CPI 1189 [CAS]	210475-67-5	WO 9631462	Cognition enhancer	Dementia, AIDS-related
CRA-0450			WO 0202549	Anxiolytic	Unspecified

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
creatine-O-phosphate  CRL-5861	Guanidine, N-methyl-N-[2-(phosphonoxy)ethyl]- [CAS]	6903-79-3	US 4837014	Antianginal	Anaemia, sickle cell
	Oxirane, methyl-, polymer with oxirane, block [CAS]	106392-12-5		Antisickling	
crobenetine	(2R,6S)-3-[2(S)-Benzyloxypropyl]-6,11,11-trimethyl-1,2,3,4,5,6,-hexahydro-2,6-methano-3-benzazocin-10-ol		WO 9914199	Neuroprotective	Ischaemia, cerebral
croconazole	1H-Imidazole, 1-[1-[2-[(3-chlorophenyl)methoxy]phenyl]ethenyl]- [CAS]	77175-51-0	DE 3021467	Antifungal	Infection, fungal, general
cromoglicic acid	4H-1-Benzopyran-2-carboxylic acid, 5,5'-[[2-hydroxy-1,3-propanediyl]bis(oxy)]bis4-oxo- [CAS]	53736-52-0		Formulation, mucosal, topical	Conjunctivitis
	4H-1-Benzopyran-2-carboxylic acid, 5,5'-[[2-hydroxy-1,3-propanediyl]bis(oxy)]bis[4-oxo-, [CAS]	15826-37-6 16110-51-3		Formulation, inhalable, solution	Asthma
cromolyn	□	633-47-6	US 4557935 EP 799823	Formulation, dermal, topical Analgesic, other	Infection, dermatological Pain, general
Cropropamide		483-63-6			
Crotamiton		6168-76-9			
Crotethamide					
Crystacide CS-502	4-[(1E,3E)-4-[trans-5-[[1R,2R)-2-(2,4-difluorophenyl)-2-hydroxy-1-methyl-3-(1H-1,2,4-triazol-1-yl)propyl]thio]-1,3-dioxan-2-yl]-1,3-butadienyl]-3-fluorobenzonitrile			Antifungal	Infection, fungal, general
CS-758	1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-3-[[[(3R)-5-oxo-3-pyrrolidinyl]thio]-, (2,2-dimethyl-1-oxopropoxy) methyl ester, (4R,5S,6S)- [CAS]				
CS-834		157542-49-9	EP 599512	Beta-lactam antibiotic	Infection, general

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CT-052923	[(2H-benzod[1,3-dioxalan-5-methyl)amino][4-(6,7-dimethoxyquinazolin-4-yl)piperazinyl]methane-1-thione			Cardiovascular	Restenosis
CT-32228	N-(4-bromophenyl)-6-(5-chloro-2-methylphenyl)-[1,3,5]triazine-2,4-diamine	866-82-0 13007-93-7		Anticancer, other	Cancer, general
CVT-2584	Ethanol, 2,2'-[[6-[(4-methoxyphenyl)methyl]amino]-9-(1-methylethyl)-9H-purin-2-yl]imino]bis-[CAS] ((S)-6-amino-5-(6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxamido)-3-methyl-1-phenyl-2,4-(1H,3H)-pyrimidinedione	199986-75-9	WO 9805335	Cardiovascular	Restenosis
CX-659S		140-87-4 3546-03-0 528-58-5		Dermatological	Eczema, general
Cyacetacide					
Cyamemazine					
Cyanidin			WO 00172745	Anticancer, other	Cancer, general
CYC400		3485-14-1 456-59-7 3572-80-3 15301-52-7 532-52-5			
Cyclacillin					
Cyclandelate					
Cyclazocine					
Cyclexanone					
Cyclexedrine					
cyclidrol	3-Cyclohexene-1-methanol, 5-hydroxy-Alpha,Alpha,4-trimethyl- [CAS]	498-71-5		COPD treatment, Respiratory	Bronchitis, chronic
cyclin D1 inhibitors			US 6033843	Anticancer, hormonal	Cancer, breast
Cyclizine		82-92-8			
Cyclobarbitol		52-31-3			
Cyclobendazole		31431-43-3			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
cyclobenzaprine	1-Propanamine, 3-(5H-dibenzo[a,d]cyclohepten-5-ylidene)-N,N-dimethyl-[CAS]	303-53-7		Formulation, modified-release, other	Muscle spasm, general
<b>Cyclobutyrol</b>		512-16-3			
<b>Cyclocumarol</b>		518-20-7			
<b>Cyclodrine</b>		52109-93-0			
<b>Cyclofenil</b>		2624-43-3			
<b>Cycloguanil</b>		516-21-2			
<b>Cyclomethycaine</b>		139-62-8			
<b>Cyclonium iodide</b>		6577-41-9			
<b>Cyclopentamine</b>		102-45-4			
<b>Cyclopenthiazide</b>		742-20-1			
<b>Cyclopentobarbital</b>		76-68-6			
<b>Cyclopentolate</b>		512-15-2			
	N,N-Bis(2-chloroethyl)tetrahydro-2H-1,3,2-oxazaphosphorin-2-amine-2-oxide monohydrate	50-18-0 6055-19-2		Formulation, parenteral, targeted	Cancer, general
cyclophosphamide					
	2(1H)-Pyridinone, 6-cyclohexyl-1-hydroxy-4-methyl-, cmpd with 2-aminoethanol(1:1) [CAS]	41621-49-2 68-41-7		Formulation, transdermal, other	Vaginitis
cyclopiroxalamine		2259-96-3			
<b>Cycloserine</b>		579-23-7			
<b>Cyclothiazide</b>		508-77-0			
<b>Cyclovalone</b>					
<b>Cymar</b>					
	Carbamic acid, [4-(1-methylethyl)phenyl]-, (3aS,8aR)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl ester [CAS]	145209-39-8	WO 9902154	Cognition enhancer	Alzheimer's disease
cymserine		30964-13-7		Dermatological	Unspecified
<b>Cynarin(e)</b>			US 6063606		
CYP26 inhibitors					
<b>Cyproheptadine</b>		129-03-3			
	(1β,2β)-6-Chloro-1,2-dihydro-17-hydroxy-3H-cyclopropa[1,2]pregna-1,4,6-triene-3,20-dione [CAS]			Radio/chemoprotective	Chemotherapy-induced injury, general
cyproterone		2098-66-0			

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<b>Cysteamine</b>		60-23-1			
cystic fibrosis ther	[[4-[[3-[[4-[1-(4-hydroxyphenyl)-1-methyl-ethyl]phenoxy]methyl]phenyl]methoxy]-phenyl]iminomethyl]-, ethyl ester			Cystic fibrosis treatment	Cystic fibrosis
cytarabine	2(1H)-Pyrimidinone, 4-amino-1-[5-O-[hydroxy(octadecyloxy)phosphinyl]-β-D-arabinofuranosyl]-, [CAS]	65093-40-5 147-94-4	EP 239015	Anticancer, antimetabolite	Myelodysplastic syndrome
D-24851	N-(Pyridin-4-yl)-(1-(4-chlorobenzyl)-indol-3-yl)-glyoxyl-amide			Anticancer, other	Cancer, general
D-4418	8-Methoxyquinoline-5-[N-(2,5-dichloropyridin-3-yl)]carboxamide			Antiasthma	Asthma
DA-5018	Benzeneacetamide, 4-(2-aminoethoxy)-N-(3-(3,4-dimethylphenyl)propyl)-3-methoxy-, monohydrochloride [CAS]	174661-97-3	US 5242944	Analgesic, other	Pain, musculoskeletal
DA-6034			US 6025387	GI inflammatory/bowel disorders	Crohn's disease
DA-7867			KR 9957803	Antibacterial, other	Infection, general
DA-7911			KR 56034	Antiarthritic, other	Arthritis, rheumatoid
DA-8159	3-(1-Methyl-7-oxo-3-propyl-6,7-dihydro-1H-pyrazolo-[4,3-d]pyrimidin-5-yl)-N-[2-(1-methylpyrrolidin-2-yl)ethyl]-4-propoxybenzenesulfonamide				Sexual dysfunction, male, general
<b>Dacarbazine</b>		4342-3-4	KR 353014	Male sexual dysfunction	
<b>Dacizumab</b>		152923-56-3			
<b>Dactinomycin</b>		50-76-0			
dalbavancin	5,31-Dichloro-38-de(methoxycarbonyl)-7-demethyl-19-deoxy-56-O-[2-deoxy-2-(10-methylundecanamido)-β-D-glucopyranosyl]-38-[N-[3-(dimethylamino)propyl]carbamoyl]-42-O-Alpha-D-mannopyranosyl-N15-methyliristomycin A aglycone	171500-79-1		Peptide antibiotic	Infection, dermatological

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Dalfopristin</b>	Virginiamycin M1, 26-(2-(diethylamino)ethyl)sulfonyl)-26,27-dihydro-, (26R,27S)-, mixt with 4-(4-(dimethylamino)-N-methyl-L-phenylalanine)-5-(5-(1-azabicyclo(2.2.2)oct-3-ylthio)methyl)-4-oxo-L-2-piperidinecarboxylic acid	112362-50-2			
dalfopristin + quinupristin	virginiamycin S1- [CAS]	126602-89-9	EP 248703	Antibiotic, other	Infection, respiratory tract, general
dalteparin	Heparin-, [CAS]	9041-08-1	US 4303651	Anticoagulant	Thromboprophylaxis
<b>Daltroban</b>		79094-20-5			
<b><math>\delta</math>-Aminolevulinic Acid</b>		106-60-5	EP 66908	Anticoagulant	Thrombosis, venous
danaparoid					
danazol	Pregna-2,4-dien-20-yno[2,3-d]isoxazol-17-ol, (17Alpha)- [CAS]	17230-88-5	GB 905844	Menstruation disorders	
<b>Danthron</b>		117-10-2			
<b>Dantrolene</b>		7261-97-4			
dapiprazole	1,2,4-Triazolo[4,3-a]pyridine, 5,6,7,8-tetrahydro-3-[2-{4-(2-methylphenyl)-1-piperazinyl}ethyl]- [CAS]	72822-12-9			
	4-[[4-(2,4,6-trimethylphenyl)amino]pyrimidin-2-yl]amino]benzonitrile	72822-13-0	US 4252721	Ophthalmological	Glaucoma
dapivirine	(+)-(S)-N,N-dimethyl-Alpha-[2-(1-naphthyl-oxy)ethyl]benzylamine HCl	244767-67-7		Antiviral, anti-HIV	Infection, HIV/AIDS
dapoxetine	4,4'-Sulfonyldianiline	119356-77-3	EP 288188	Male sexual dysfunction	Premature ejaculation
dapsone		80-08-0			Acne
daptomycin	Daptomycin [CAS]	103060-53-3	EP 178152	Formulation, dermal, topical Peptide antibiotic	Infection, dermatological
<b>Darbepoetin Alfa</b>					
darifenacin	3-Pyrrolidineacetamide, 1-[2-(2,3-dihydro-5-benzofuranyl)ethyl]-Alpha,Alpha-diphenyl-, (S)- [CAS]	133099-04-4	EP 388054	Urological	Overactive bladder



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daunorubicin	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy- $\alpha$ -L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-[CAS]	20830-81-3	US 5441745	Formulation, optimized, liposomes	Cancer, sarcoma, Kaposi's
DAX, SciClone	3-diallyl-8-cyclohexylxanthine			Cystic fibrosis treatment	Cystic fibrosis
DB-67	7-tert-Butyldimethylsilyl-10-hydroxycamptothecin			Anticancer, other	Cancer, general
d-Camphocarboxylic Acid		18530-30-8			
DCF-987	Dextran		US 5514665	Formulation, other	Cystic fibrosis
DDT		50-29-3			
Deaminooxytocin		113-78-0			
Deanol		108-01-0			
Debrisoquin		1131-64-2			
Decamethonium		541-22-0			
Decimemide		14817-09-5			
decitabine	1,3,5-Triazin-2(1H)-one, 4-amino-1-(2-deoxy- $\beta$ -D-erythro-pentofuranosyl)-[CAS]	23339-46-0		Anticancer, antimetabolite	Myelodysplastic syndrome
declopramide	Benzamide, 4-amino-3-chloro-N-(2-(diethylamino)ethyl)- [CAS]	2353-33-5	WO 9732582	Anticancer, other	Cancer, colorectal
Deferiprone		891-60-1			
Deferoxamine		30652-11-0			
		70-51-9			
deflazacort	5'H-Pregna-1,4-dieno[17,16-d]oxazole-3,20-dione, 21-(acetyloxy)-11-hydroxy-2'-methyl-, (11 $\beta$ ,16 $\beta$ )- [CAS]	14484-47-0	GB 1077393	Hormone	Asthma
Defosfamide		74712-90-6			
		3733-81-1			

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degarelix	N-acetyl-3-(naphtalen-2-yl)-D-alanyl-4-chloro-D-phenylalanyl-3-(pyridin-3-yl)-D-alanyl-L-seryl-4-[[[(4S)-2,6-dioxohexahydropyrimidin-4-yl]carbonyl]amino]-L-phenylalanyl-4-(carbamoylamino)-D-phenylalanyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl-D-alaninamide	214766-78-6		Anticancer, hormonal	Cancer, prostate
dehydroascorbic acid	L-threo-2,3-Hexodiolulosonic acid gamma-lactone	490-83-5 81-23-2		Cognition enhancer	Alzheimer's disease
Dehydrocholic Acid		4914-30-1			
delapril	Glycine, N-(2,3-dihydro-1H-inden-2-yl)-N-[N-[1-(ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-, (S)- [CAS]	83435-66-9 83435-67-0	EP 51391	Antihypertensive, renin system	Hypertension, general
delapril+manidipine	Glycine, N-(2,3-dihydro-1H-inden-2-yl)-N-[N-[1-(ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-, (S)-3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-2-[4-(diphenylmethyl)-1-piperazinyl]ethyl methyl ester [CAS]		FR 2733911	Formulation, fixed-dose combinations	Hypertension, general
delavirdine	Piperazine, 1-[3-[(1-methylethyl)amino]-2-pyridinyl]-4-[[5-[(methylsulfonyl)amino]-1H-indol-2-yl]carbonyl]- [CAS]	136817-59-9 13698-49-2 79874-76-3	WO 9109849	Antiviral, anti-HIV	Infection, HIV/AIDS
Delmadinone	2H-1,4-Benzodiazepin-2-one, 7-chloro-5-(2-chlorophenyl)-1,3-dihydro- [CAS]	2894-67-9	CH 408029	Anxiolytic	
delorazepam	3,3-Bis-(m-fluorophenyl)-N-methylpropylamine [CAS]	186495-99-8 6909-62-2 56-94-0		Neuroprotective	Ischaemia, cerebral
delucemine					
Demanyl					
Demecarium					

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demeclocycline	2-Naphthacene-carboxamide, 7-chloro-4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-1,11-dioxo-, [4S-]	127-33-3		Formulation, modified-release, <=24hr	Infection, general
<b>Demecolcine</b>		477-30-5			
<b>Demegestone</b>	(4Alpha,4aAlpha,5aAlpha,6beta,12aAlpha)-[CAS]	10116-22-0			
<b>Demexiptiline</b>		24701-51-7			
denaverine	Benzeneacetic acid, Alpha-(2-ethylbutoxy)-Alpha-phenyl-, 2-(dimethylamino)ethyl ester, [CAS]	3321-06-0	DE 4133785	Analgesic, NSAID	Pain, musculoskeletal
<b>Denileukin Diftitox</b>		173146-27-5			
<b>Denopamine</b>		71771-90-9			
<b>Denopterin</b>		22006-84-4			
<b>Deoxycholic Acid</b>		83-44-3			
<b>Deoxycorticosterone</b>		64-85-7			
		56-47-3			
<b>Deoxydihydrostreptomycin</b>		26086-49-7			
<b>Deoxyepinephrine</b>		501-15-5			
<b>Depreotide</b>		161982-62-3			
depsipeptide	L-Valine, N-[(3S,4E)-3-hydroxy-7-mercaptop-1-oxo-4-heptenyl]-D-valyl-D-cysteinyl-(2Z)-2-amino-2-butenoyl-, (4-1)-lactone, cyclic (1-2)-disulfide [CAS]	128517-07-7	EP 352646	Anticancer, antibiotic	Cancer, general
<b>Deptropine</b>		604-51-3			
<b>Dequalinium</b>		522-51-0			
dersalazine	Benzoic acid, 2-hydroxy-5-[[4-{3-[4-(2-methyl-1H-imidazol[4,5-c]pyridin-1-yl)methyl]-1-piperidinyl]-3-oxo-1-phenyl-1-propenyl]phenyl]azo] (Z) [CAS]	188913-57-7 188913-58-8	US 5747477	Anti-inflammatory	Colitis, ulcerative
<b>Deserpidine</b>		131-01-1			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
desferrioxamine	Butanediamide, N'-[5-[[4-[[5-(acetylhydroxyamino)pentyl]amino]-1,4-dioxobutyl]hydroxyamino]pentyl]-N-(5-aminopentyl)-N-hydroxy- [CAS]	70-51-9 57041-67-5 50-47-5 17598-65-1		Antidote	Poisoning, metal
<b>Desflurane</b>					
<b>Desipramine</b>					
<b>Deslanoside</b>					
desloratadine	5H-Benzo(5,6)cyclohepta(1,2-b)pyridine, 8-chloro-6,11-dihydro-11-(4-piperidinylidene)- [CAS]	100643-71-8	US 5595997	Antiallergic, non-asthma	Rhinitis, allergic, perennial
deslorelin	Luteinizing hormone-releasing factor (pig), 6-D-tryptophan-9-(N-ethyl-L-prolinamide)-10-deglycinamide- [CAS]	57773-65-6	US 4034082	Releasing hormones	Cancer, prostate
desmopressin	Vasopressin, 1-(3-mercaptopropanoic acid)-8-D-arginine- [CAS]	16679-58-6 54024-22-5	DE 2948345	Hormone	Enuresis
<b>Desogestrel</b>					
desogestrel + estradiol	Estra-1,3,5(10)-triene-3,17-diol (17β)-, mixt. with (17α)-13-ethyl-11-methylene-18,19-dinorpregn-4-en-20-yn-17-ol [CAS]	122364-17-4		Menopausal disorders	Hormone replacement therapy
desogestrel, Akzo Nobel	18,19-Dinorpregn-4-en-20-yn-17-ol, 13-ethyl-11-methylene-, (17α)- [CAS]	54024-55-5 54024-22-5		Formulation, oral, other	Contraceptive, female
desogestrel+ethinylestrad (1)	18,19-Dinorpregn-4-en-20-yn-17-ol, 13-ethyl-11-methylene-, (17α)- [CAS]	71138-35-7	US 3927046	Formulation, oral, other	Contraceptive, female
<b>Desomorphine</b>		427-00-9			
<b>Desonide</b>		638-94-8			
<b>Desoximetasone</b>		382-67-2			
<b>Detaxtran</b>		9015-73-0			
Devacade			WO 9308176	Analgesic, other	Pain, general
dexamethasone	Pregna-1,4-diene-3,20-dione,9-fluoro-11,17,21-trihydroxy-16-methyl-, (11β,16α)- [CAS]	50-02-2 2392-39-4 312-93-6		Formulation, other	Inflammation, ocular
dexanabinol	6H-Dibenzo[b,d]pyran-9-methanol, 3-(1,1-dimethylheptyl)-6a,7,10,10a-tetrahydro-1-hydroxy-6,6-dimethyl-, (6aS-trans)- [CAS]	112924-45-5	EP 427518	Neuroprotective	Head trauma

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dexecadotril	Glycine, N-[2-((acetylthio)methyl)-1-oxo-3-phenylpropyl]-, phenylmethyl ester, (R)- [CAS]	112573-72-5	EP 318377	Alimentary/Metabolic, other	Unspecified
dexefaroxan	1H-Imidazole, 2-(2-ethyl-2,3-dihydro-2-benzofuranyl)-4,5-dihydro- [CAS]	89197-00-2 89197-32-0	EP 71368	Cognition enhancer	Alzheimer's disease
<b>Dexetimide</b>		21888-98-2			
dexibuprofen	Benzeneacetic acid, Alpha-methyl-4-(2-methylpropyl)-, (AlphaS)- [CAS]	51146-56-6		Analgesic, NSAID	Pain, general
dexketoprofen	Benzeneacetic acid, 3-benzoyl-Alpha-methyl-, (S)- [CAS]	22161-81-5		Anti-inflammatory	Inflammation, general
dexloxiglumide	Pentanoic acid, 4-[(3,4-dichlorobenzoyl)amino]-5-[(3-methoxypropyl)pentylamino]-5-oxo-, (R)- [CAS]	119817-90-2	EP 0344184	GI inflammatory/bowel disorders	Irritable bowel syndrome
dexmedetomidine	1H-Imidazole, 4-[1-(2,3-dimethylphenyl)ethyl]-, (R)- [CAS]	113775-47-6			
dexmethylphenidate	2-Piperidineacetic acid, Alpha-phenyl-, methyl ester, (AlphaR,2R)-	86347-15-1	EP 187471	Hypnotic/Sedative	Anaesthesia
<b>Dexpanthenol</b>		19262-68-1		Psychostimulant	Attention deficit disorder
dexrazoxane	2,6-Piperazinedione, 4,4'-(1-methyl-1,2-ethanediyl)bis-, (S)- [CAS]	81-13-0			
Dextran-1	Dextran [CAS]	24584-09-6	DE 1910283	Radio/chemoprotective	Chemotherapy-induced injury, general
<b>Dextranomer</b>		9004-54-0		Plasma substitute	
<b>Dextroamphetamine</b>		56087-11-7			
dextromethorphan	Morphinan, 3-methoxy-17-methyl-, (9Alpha,13Alpha,14Alpha)-	51-64-9			
<b>Dextromoramide</b>		6700-34-1			
dextropropoxyphene		125-71-3	US 4221788	Formulation, oral, other	Cough, Emotional lability
<b>Dezocine</b>		357-56-2			
	Benzeneethanol, Alpha-[2-(dimethylamino)-1-methylethyl]-Alpha-phenyl-, propanoate (ester), [S-(R*,S*)]- [CAS]	469-62-5		Formulation, modified-release, other	Pain, general
DF-1012	N-Tropyl 7-azaindol-3-ylcarboxamide	53648-55-8			
		163220-65-3	WO 9504742	Respiratory	Respiratory disease, general
DFA-IV	di-D-fructofuranose 2,6':6,2' dianhydride		US 5700832	Antianaemic	Anaemia, aplastic

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
d-Fenchone		4695-62-9			
p-Glucuronolactone		32449-92-6			
Diab II	Diab II	309956-85-2	US 6153632	Antidiabetic	Diabetes, Type II
diacerein	2-Anthracenecarboxylic acid, 4,5-bis(acetyloxy)-9,10-dihydro-9,10-dioxo-[CAS]	13739-02-1			
Diampromide		552-25-0			
Diamthazole		136-96-9	US 4244968	Antiarthritic, other	Arthritis, rheumatoid
Diathymosulfone		5964-62-5			
Diatrizoate		737-31-5			
diazepam	2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl- [CAS]	439-14-5		Formulation, transmucosal, systemic	Anxiety, epilepsy, general
Diaziquone		57998-68-2			
Diazoxide		364-98-7			
dibekacin	D-Streptamine, O-3-amino-3-deoxy-Alpha-D-glucopyranosyl-(1-6)-O-[2,6-diamino-2,3,4,6-tetra-deoxy-Alpha-D-erythro-hexopyranosyl-(1-4)]-2-deoxy-, sulfate (salt)[CAS]	34493-98-6			
Dibenzepin		58580-55-5	GB 1349302	Aminoglycoside antibiotic	Infection, general
Dibromopropamide		4498-32-2			
Dibucaine		496-00-4			
Dichloralphenazone		61-12-1			
Dichloramine T		480-30-8			
Dichlorisone		473-34-7			
Dichlorobenzyl Alcohol		7008-26-6			
		1777-82-8			
Dichlorophen		97-23-4			
Dichlorophenarsine		536-29-8			
Dichlorphenamide		120-97-8			
diclofenac + HA	Hyaluronic acid + benzenecacetic acid, 2-[[[2,6-dichlorophenyl]amino]- [CAS]	15307-79-6		Formulation, transdermal, systemic	Keratosis
diclofenac	Benzenecacetic acid, 2-[(2,6-dichlorophenyl)amino]-, [CAS]	15307-86-5			
		15307-81-0		Formulation, modified-release, <=24hr	Pain, general



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Dicloxacillin		3116-76-5			
Dicumarol		66-76-2			
Dicyclomine		77-19-0			
didanosine	Inosine, 2',3'-dideoxy- [CAS]	69655-05-6	US 4861759	Antiviral, anti-HIV	Infection, HIV/AIDS
Dideoxyadenosine		4097-22-7			
didox	Benzamide, N,3,4-trihydroxy- [CAS]	69839-83-4	US 4263322	Anticancer, antimetabolite	Cancer, general
Dienestrol		84-17-3			
dienogest	19-Norpregna-4,9-diene-21-nitrile, 17-hydroxy-3-oxo-, (17Alpha)- [CAS]	65928-58-7	GB 1524917	Menstruation disorders	Endometriosis
dienogest+estradiol	19-Norpregna-4,9-diene-21-nitrile, 17-hydroxy-3-oxo-, (17Alpha) + Estradiol, 1,3,5(10)-triene-3,17-diol(17B)				
Diethadlone		702-54-5			
Diethazine		60-91-3			
Diethylbromoacetamide		511-70-6			
Diethylcarbamazine		90-89-1			
diethylpropion	1-Propanone, 2-(diethylamino)-1-phenyl- [CAS]	90-84-6		Formulation, modified-release, <=24hr	Obesity
Diethylstilbestrol		56-53-1			
Difemerine		80387-96-8			
Difenamizole		20170-20-1			
Difenoxin		28782-42-5			
Difenpiramide		51484-40-3			
diflomotecan	(5R)-5-Ethyl-9,10-difluoro-1,4,5,13-tetrahydro-5-hydroxy-3H,15H-oxepino[3',4':6,indolizino[1,2-b]quinoline-3,15-dione	220997-97-7		Anticancer, other	Cancer, general
diflorasone	Pregna-1,4-diene-3,20-dione, 17,21-bis(acetyloxy)-6,9-difluoro-11-hydroxy-16-methyl-, (6Alpha,11B,16B)- [CAS]	33564-31-7			
Difloxacin		2557-49-5	US 3980778	Antipsoriasis	
Diflucortolone		98106-17-3			
		2607-6-9			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
diflunisal	2',4'-difluoro-4-hydroxy[1,1'-biphenyl]-3-carboxylic acid	23674-86-4 22494-42-4	GB 1175212	Analgesic, NSAID	Pain, post-operative
Difluprednate		23674-86-4			
Digitalin		752-61-4			
Digitoxin		71-63-6			
digoxin	Card-20(22)-enolide, 3-[(O-2,6-dideoxy-β-D-ribo-hexopyranosyl)-(1-4)-O-2,6-dideoxy-β-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-β-D-ribo-hexopyranosyl)oxy]-12,14-dihydroxy-, (3β,5β,12β)- [CAS]	20830-75-5	US 4088750	Formulation, oral, enteric-coated	Heart failure
Dihexyverine		561-77-3			
Dihydralazine		484-23-1			
Dihydrocodeine		125-28-0			
Dihydrocodeinone Enol		466-90-0			
dihydroergocryptine	Ergocryptine, dihydro- [CAS]	25447-66-9		Formulation, other	Depression, general
dihydroergotamine	Ergotaman-3',6',18-trione, 9,10-dihydro-12'-hydroxy-2'-methyl-5'-(phenylmethyl)-, (5'Alpha,10Alpha)- [CAS]	511-12-6 509-60-4 128-46-1	6495535	Formulation, modified-release, other	Migraine
Dihydromorphine		67-96-9			
Dihydrostreptomycin		13682-92-3			
Dihydrotachysterol		539-68-4			
Dihydroxyaluminum		5966-41-6 3254-66-8 660-27-5			
Diisopromine					
Diisopropyl Paraoxon					
Diisopropylamine					
dilazep	Benzoic acid, 3,4,5-trimethoxy-, (tetrahydro-1H-1,4-diazepine-1,4(5H)-diyl)di-3,1-propanediyl ester [CAS]	35898-87-4 75659-07-3	JP 51095086	Vasodilator, coronary	
Dilevalol					
diloxanide	2-Furancarboxylic acid, 4-[[[dichloroacetyl]methylamino]phenyl ester [CAS]	3736-81-0 579-38-4		Amoebicide	

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diltiazem	1,5-Benzothiazepin-4(5H)-one, 3-(acetyloxy)-5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, (2S-cis)- [CAS]	33286-22-5 42399-41-7 7706-67-4 1165-48-6 36309-01-0 523-87-5 509-78-4 545-90-4 59-52-9 4757-55-5 695-53-4 519-30-2 5636-83-9 86-80-6 79-64-1 94-15-5 477-93-0 67-68-5 524-84-5 22950-29-4 119-48-2	US 4721619 US 5529791 EP 322277	Antianginal	Angina, hypertension, general
Dimicrotic Acid					
Dimeflin					
Dimemorfan					
Dimenhydrinate					
Dimenoxadol					
Dimepheptanol					
Dimercaprol					
Dimetacrine					
Dimethadione					
Dimethazan					
Dimethindene					
Dimethisoquin					
Dimethisterone					
Dimethocaine					
Dimethoxanate					
Dimethyl Sulfoxide					
Dimethylthiambutene					
Dimetofrine					
Dimorpholamine					
dinoprostone	Prosta-5,13-dien-1-oic acid, 11,15-dihydroxy-9-oxo-, (5Z,11Alpha,13E,15S)- [CAS]	363-24-6			
diosmectite	Smecta- [CAS]	110070-78-5	FR 2770778	Formulation, modified-release, <=24hr Antidiarrhoeal	Labour, induction Diarrhoea, general
diosmin	4H-1-Benzopyran-4-one, 7-[[6-O-(6-deoxy-Alpha-L-mannopyranosyl)-beta.-D-glucopyranosyl]oxy]-5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)- [CAS]	520-27-4 6495-46-1 467-86-7 497-75-6 131-53-3	DE 2602314	Vasoprotective, systemic	
Dioxadrol					
Dioxaphetyl					
Dioxethedrine					
Dioxybenzone					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<u>Diphemanil</u>		62-97-5			
<u>Diphenadione</u>		82-66-6			
<u>Diphencyprone</u>		886-38-4			
<u>Diphenhydramine</u>		58-73-1			
<u>Diphenidol</u>		972-02-1			
<u>Diphenoxylate</u>		915-30-0			
<u>Diphenylpyraline</u>		147-20-6			
<u>Diphetarsone</u>		515-76-4			
<i>Diphtheria &amp; Tetanus Toxoids And Acellular Pertussis Vaccine Adsorbed</i>		467-83-4			
<u>Dipipanone</u>	Propanoic acid, 2,2-dimethyl-, 4-[1-hydroxy-2-(methylamino)ethyl]-1,2-phenylene ester, (+/-)- [CAS]	52365-63-6	US 3809714	Antiglaucoma	Glaucoma
<u>dipivefrin</u>		58-32-2			
<u>Dipyridamole</u>		486-79-3			
<u>Dipyrocetyl</u>		5907-38-0			
<u>Dipyrrone</u>					
<u>diquafosol</u>	Uridine 5'-(pentahydrogen tetraphosphate) 5'-ester with uridine, [CAS]	211427-08-6		Ophthalmological	Dry eye syndrome
<u>dirithromycin</u>	Erythromycin, 9-deoxo-11-deoxy-9,11-[limino[2-(2-methoxyethoxy)ethylidene]oxy]-, [9S(R)]- [CAS]	62013-04-1	DE 2515075	Macrolide antibiotic	Tonsillitis
<u>disodium pamidronate</u>	Phosphonic acid, (3-amino-1-hydroxypropylidene)bis-, disodium salt [CAS]	57248-88-1	EP 177443	Osteoporosis treatment	Hypercalcaemia of malignancy
<u>Disofenin</u>		65717-97-7			
<u>disopyramide</u>	2-Pyridineacetamide, Alpha-[2-bis(1-methylethyl)amino]ethyl]-Alpha-phenyl- [CAS]	3737-09-5			
<u>Distigmine</u>		15876-67-2		Formulation, modified-release, <=24hr	Arrhythmia, general
<u>Disulfamide</u>		671-88-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication				
Disulfiram	9(10H)-Anthracenone, 1,8-dihydroxy- [CAS]	97-77-8	WO 01027115	Formulation, dermal, topical	Psoriasis				
Ditazol		18471-20-0							
Dithiazanine		514-73-8							
dithranol		1143-38-0							
Ditiocarb		148-18-5							
Dixanthogen		502-55-6							
Dixyrazine	(-)-7-[(7S)-7-Amino-5-azaspiro[2,4]heptan-5-yl]-6-fluoro-1-[(1R,2S)-2-fluoro-1-cyclopropyl]-1,4-dihydro-8-methoxy-4-oxo-3-quinolinecarboxylic acid hydrochloride monohydrate	2470-73-7	WO 01027115	Anticancer, other	Cancer, general				
DJ-927									
DK-507k									
DL-Lactic Acid		598-82-3							
DMDC		113648-25-2							
DMXAA									
DNA Stealth Nucleosides	Cytidine, 2'-deoxy-2'-methylene-, monohydrochloride [CAS] 5,6-dimethylxanthenone-4-acetic acid		WO 8807049	Anticancer, antimetabolite	Cancer, general				
Dobesilate		20123-80-2							
dobutamine		34368-04-2				US 3987200	Cardiostimulant		
		49745-95-1							
Docarpamine		74639-40-0				US			
docetaxel	(2R,3S)-N-Carboxy-3-phenylisoserine, N-tert-butyl ester, 13-ester with 5β,20-epoxy-1,2Alpha,4,7β,10β,13Alpha-hexahydroxytax-11-en-9-one 4-acetate 2-benzoate- [CAS]	114977-28-5	EP 253738 EP 707487	Anticancer, other Hypolipaeimic/Antiatherosclerosis	Cancer, breast Hyperlipidaemia, general				
docosahexaenoic acid		148408-66-6							
docosanol		661-19-8				EP 469064	Antiviral, other	Infection, herpes simplex virus Infection, herpes simplex virus	
		128-49-4							
docusate		577-11-7				US 4752617	Formulation, dermal, topical	prophylaxis	

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dofetilide	Methanesulfonamide, N-[4-[2-[methyl[2-[4-[(methanesulfonyl)amino]phenoxy]ethyl]aminomethyl]phenyl]- [CAS]	115256-11-6	EP 245997	Antiarrhythmic	Fibrillation, atrial
dolasetron mesilate	1H-Indole-3-carboxylic acid, octahydro-3-oxo-2,6-methano-2H-quinolizin-8-yl ester, (2Alpha,6Alpha,8Alpha,9Alpha)-, monomethanesulfonate- [CAS]	115956-13-3 115956-12-2 61869-07-6	EP 266730	Antiemetic	Chemotherapy-induced nausea and vomiting
<b>Domiodol</b>		538-71-6			
<b>Domiphen</b>		112966-96-8			
<b>Domitroban</b>					
domperidone	2H-Benzimidazol-2-one, 5-chloro-1-[1-[3-(2,3-dihydro-2-oxo-1H-benzimidazol-1-yl)propyl]-4-piperidinyl]-1,3-dihydro- [CAS]	57808-66-9	US 4066772	Antiemetic	
donepezil	1H-Inden-1-one, 2,3-dihydro-5,6-dimethoxy-2-((1-(phenylmethyl)-4-piperidinyl)methyl)-, [CAS]	120011-70-3 120014-06-4	EP 296560	Cognition enhancer	Alzheimer's disease
donitriptan	Piperazine, 1-(((3-(2-aminoethyl)-1H-indol-5-yl)oxy)acetyl)-4-(4-cyanophenyl)- [CAS]	170912-52-4			
<b>Dopamine</b>		51-61-6			
<b>Dopexamine</b>		86197-47-9			
doramapimod	urea, N-[3-(1,1-dimethylethyl)-1-(4-methylphenyl)-1H-pyrazol-5-yl]-N'-[4-[2-(4-morpholinyl)ethoxy]-1-naphthalenyl]-	285983-48-4		Antiarthritic, immunological	Arthritis, rheumatoid
doranidazole	(±)-1,2,4-Butanetriol, 3-((2-nitro-1H-imidazol-1-yl)methoxy)- [CAS]	137339-64-1	WO 9414778	Radio/chemosensitizer	Surgery adjunct
doripenem	(1R,5S,6S)-2-[(3S,5S)-5-(sulfamoylaminomethyl)pyrrolidin-3-yl]thio-6-[(1R)-1-hydroxyethyl]-1-methylcarbapen-2-em-3-carboxylic acid	148016-81-3	EP 528678	Beta-lactam antibiotic	Infection, urinary tract
dorzolamide	4H-Thieno(2,3-b)thiopyran-2-sulfonamide, 4-(ethylamino)-5,6-dihydro-6-methyl-, 7,7-dioxide (4S-trans)- [CAS]	120279-96-1	EP 296879	Antiglaucoma	Glaucoma



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dorzolamide + timolol	4H-Thieno(2,3-b)thiopyran-2-sulfonamide, 4-(ethylamino)-5,6-dihydro-6-methyl-7,7-dioxide (4S-trans) + ethyl 2-propanol, 1-[[[1,1-dimethyl)amino]-3-[[4-(4-morpholinyl)-1,2,5-thiadiazol-3-yl]oxy]-, (S), (Z)-2-butenedioate (1:1) (salt) [CAS]	120279-96-1 26839-75-8 26921-17-5		Formulation, fixed-dose combinations	Glaucoma
dosmalfate	Aluminium, (μ7-(7-(6-O-(6-deoxy-2,3,4-tri-O-sulfo-Alpha-L-mannosylpyranosyl)-2,3,4-tri-O-sulfo-β-D-glucopyranosyl)oxy)-5-hydroxy-2-(4-methoxy-3-(sulfooxy)phenyl)-4H-1-benzopyran-4-onato(7-)))tetradeca-μ-hydroxyheneicosahydroxytetradeca- [CAS]	122312-55-4		Antitumor	Ulcer, gastric
dosulepine	1-Propanamine, 3-dibenzo[b,e]thiepin-11(6H)-ylidene-N,N-dimethyl- [CAS]	113-53-1		Antidepressant	
Dotarizine		84625-59-2			
Dothiepin		113-53-1			
Doxacurium		106819-53-8			
Doxapram		309-29-5			
doxazosin	Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-[[2,3-dihydro-1,4-benzodioxin-2-yl)carbonyl]- [CAS]	74191-85-8 40762-15-0 3254-93-1	GB 2007656	Antihypertensive, adrenergic	Hypertension, general
Doxefazepam					
Doxenitoin	1-Propanamine, 3-dibenzo[b,e]oxepin-11(6H)-ylidene-N,N-dimethyl-	1668-19-5		Formulation, dermal, topical	Pruritus
doxepin					
doxercalciferol	9,10-secoergosta-5,7,10(19),22-tetraene-1,3-diol (1Alpha, 3β, 5Z, 7E, 22E) [CAS]	54573-75-0	US 5104854	Hormone	Hyperparathyroidism
doxifluridine	Uridine, 5'-deoxy-5-fluoro- [CAS]	3094-09-5	US 4071680	Anticancer, antimetabolite	Cancer, colorectal
doxofylline	1H-Purine-2,6-dione, 7-(1,3-dioxolan-2-ylmethyl)-3,7-dihydro-1,3-dimethyl-[CAS]	69975-86-6	US 4187308	Antiasthma	Asthma

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doxorubicin	5,12-Naphthacenedione, 10-[(3-amino-2,3,6-trideoxy-Alpha-L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (8S-cl)- [CAS]	23214-92-8	EP 191824	Formulation, optimized, liposomes	Cancer, general
doxycycline	2-Naphthacenecarboxamine, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-[4S-(4Alpha,4aAlpha,5Alpha,5aAlpha,6Alpha,12aAlpha)]- [CAS]	564-25-0 17086-28-1		Formulation, modified-release, immediate	Periodontitis
doxylamine	N,N-Dimethyl-2-[1-phenyl-1-(2-pyridinyl)ethoxy]ethanamine	469-21-6		Formulation, transmucosal, systemic	Rhinitis, allergic, general
DPC-817	beta-D-2',3'-didehydro-2',3'-dideoxy-5-fluorocytidine		US 5681830	Antiviral, anti-HIV Analgesic, other	Infection, HIV/AIDS Pain, general
DPI-3290					
DQ-113	5-Amino-7-[(3S,4R)-(1-aminocyclopropyl)-3-fluoropyrrolidin-1-yl]-1-[(1R,2S)-2-fluoro-1-cyclopropyl]-1,4-dihydro-8-methyl-4-oxo-3-quinolinecarboxylic acid	1679-76-1 82413-20-5 2440-22-4 58-19-5		Quinolone antibacterial	Infection, general
Drofenine					
Droloxifene					
Drometrizole					
Dromostanolone					
dronabinol	6H-Dibenzo[b,d]pyran-1-ol, 6a,7,8,10a-tetrahydro-6,6,9-trimethyl-3-pentyl-, (6aR-trans)- [CAS]	1972-08-3		Antiemetic	Chemotherapy-induced nausea and vomiting
dronedarone	2-n-Butyl 3-[4-(3-di-n-butylamino-propoxy)benzoyl]5-methylsulfonamidobenzofuran				
Droperidol		548-73-2		Antiarrhythmic	Arrhythmia, general
Droprenilamine		57653-27-7			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Dropropizine</b>		17692-31-8			
<b>Drospirenone</b>		67392-87-4			
<b>Drotaverine</b>		14009-24-6			
<b>Drotebanol</b>		3/2/3176			
droxicam	2H,5H-1,3-Oxazino[5,6-c][1,2]benzothiazine-2,4(3H)-dione, 5-methyl-3-(2-pyridinyl)-, 6,6-dioxide [CAS]	90101-16-9	EP 99770	Anti-inflammatory	Inflammation, general
droxidopa	L-Tyrosine, β,3-dihydroxy-, threo- [CAS]	23651-95-8	EP 128684	Antiparkinsonian	Parkinson's disease
<b>Droxidopa</b>		23651-95-8			
DJ-125530	1,2-Benzisothiazol-3(2H)-one, 2-[4-[4-(7-chloro-2,3-dihydro-1,4-benzodioxin-5-yl)-1-piperazinyl]butyl]-, 1,1-dioxide [CAS]	161611-99-0	EP 633260	Anxiolytic	Anxiety, general
duloxetine	2-Thiophenepropanamine, N-methyl-, Gamma-(1-naphthalenyloxy)-, hydrochloride, (S)- [CAS]	136434-34-9	US 5362886	Antidepressant	Depression, general
duramycin		116539-59-4	WO 9428726	Formulation, inhalable, solution	Cystic fibrosis
<b>Durapatite</b>		1306-06-5			
dutasteride	4-Azaandrost-1-ene-17-carboxamide, N-(2,5-bis(trifluoromethyl)phenyl)-3-oxo-, (5α,17β)- [CAS]	164656-23-9	US 5565467	Prostate disorders	Benign prostatic hyperplasia
DW-1141	N,N-diisopropyl-4-[4-(3-aminobenzodioxazolo[6-yloxy]butoxy]-3-methoxybenzamide			Osteoporosis treatment	Osteoporosis
DW-286a	(R)-(-)-7-((4-aminomethyl-4-methyl-3-(Z)-methyloxyimino)pyrrolidin-1-yl)-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro[1,8]naphthyridine-3-carboxylic acid			Quinolone antibacterial	Infection, general
DW-471			US 5922871	Antiviral, other	Infection, hepatitis-B virus

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DX-9065a	2-Naphthalenepropanoic acid, 7-(aminoiminomethyl)-Alpha-[4-[[1-(1-iminoethyl)-3-pyrrolidinyl]oxy]phenyl]-, monohydrochloride, pentahydrate, [S-(R*, R*)]- [CAS]	155204-81-2		Antithrombotic	Thrombosis, general
DY-9760e	1H-Indazole, 3-[2-[4-(3-chloro-2-methylphenyl)-1-piperazinyl]ethyl]-1-(1H-imidazol-4-ylmethyl)-5,6-dimethoxy- [CAS]	160522-00-9	US 5681954	Neuroprotective	Ischaemia, cerebral
Dyclonine		586-60-7			
Dydrogesterone		152-62-5			
Dymanthine		124-28-7			
Dyphylline		479-18-5			
E-1010	1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-[(1R)-1-hydroxyethyl]-3-[[[(3S,5S)-5-[(R)-hydroxy(3R)-3-pyrrolidinylmethyl]-3-pyrrolidinyl]thio]-4-methyl-7-oxo-, monohydrochloride, (4R,5S,6S)- [CAS]	186319-97-1		Beta-lactam antibiotic	Infection, general
E-2101	N-Ethyl-1-[1-(2-fluorophenethyl)piperidin-4-yl]-1H-indol-6-yl)acetamide		WO 9606943	Muscle relaxant Anticancer, other	Muscle spasm, general Cancer, general
E-3620	Benzamide, 4-amino-5-chloro-N-(8-methyl-8-azabicyclo[3.2.1]oct-3-yl)-2-[(1-methyl-2-butynyl)oxy]-, monohydrochloride, [3(S)-endo]- [CAS]	151213-86-4	EP 554794	Antacid/Antiflatulent	Dyspepsia
E-5564	Alpha-D-Glucopyranose, 3-O-decyl-2-deoxy-6-O-(2-deoxy-3-O-((3R)-3-methoxydecyl)-6-O-methyl-2-(((11Z)-1-oxo-11-octadecenyl)amino)-4-O-phosphono-β-D-glucopyranosyl)-2-((1,3-dioxotetradecyl)amino)- 1-(dihydrogen phosphate), tetrasodium salt [CAS]	185954-98-7	EP 536969	Septic shock treatment	Sepsis

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E-5842	Pyridine, 4-(4-fluorophenyl)-1,2,3,6-tetrahydro-1-[4-(1H-1,2,4-triazol-1-yl)butyl]-2-hydroxy-1,2,3-propanetricarboxylate (1:1) [CAS]	220120-14-9		Neuroleptic	Schizophrenia
E-6259	1-(4-Aminosulfonylphenyl)-5-(2,4-difluorophenyl)-4,5-dihydro-3-trifluoromethyl-1H-pyrazole			Antiarthritic, other	Unspecified
EAA-90	[2-(8,9-Dioxo-2,6-diazabicyclo[5.2.0]non-1(7)-en-2-yl)-ethyl]phosphonic acid	57-08-9		Analgesic, other	Pain, neuropathic
<u><math>\epsilon</math>-Acetamidocaproic Acid</u>		60-32-2			
<u><math>\epsilon</math>-Aminocaproic Acid</u>					
ebastine	1-Butanone, 1-[4-(1,1-dimethylethyl)phenyl]-4-[4-(diphenylmethoxy)-1-piperidinyl]- [CAS]	90729-43-4	EP 134124	Antiallergic, non-asthma	Rhinitis, allergic, seasonal
eberconazole	1H-Imidazole, 1-(2,4-dichloro-10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-yl)- [CAS]	128326-82-9 130104-32-4	ES 2012297	Antifungal	Infection, dermatological
ebrotidine	Benzenesulfonamide, N-[[[2-[[[2-[(aminoininomethyl)amino]-4-thiazolyl]methyl]thio]ethyl]amino]methylene]-4-bromo- [CAS]	100981-43-9	EP 159012	Antiulcer	Ulcer, duodenal
ebtelen	1,2-Benzisoseselenazol-3(2H)-one, 2-phenyl- [CAS]	60940-34-3 474-00-0 104775-36-2	EP 44971	Neuroprotective	Haemorrhage, subarachnoid
<u>Eburnamonine</u>					
<u>Ecabapide</u>					
ecabet	1-Phenanthrenecarboxylic acid, 1,2,3,4,4a,9,10,10a-octahydro-1,4a-dimethyl-7-(1-methylethyl)-6-sulfo-, [1R-(1 $\alpha$ ,4 $\alpha$ ,10 $\alpha$ )]- [CAS]	33159-27-2 86408-72-2	DE 3239172	Antiulcer	Ulcer, gastric
ecadotril	Glycine, N-[2-[(acetylthio)methyl]-1-oxo-3-phenylpropyl]-,phenylmethyl ester, (S)- [CAS]	112573-73-6 484-93-5 481-37-8 513-10-0	EP 318377	Antihypertensive, other	Hypertension, general
<u>Ecgonidine</u>					
<u>Ecgonine</u>					
<u>Echothiophate</u>					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Econazole</b>	5H-Benzo[d]naphth[2,1-b]azepin-12-ol, 11-chloro-6,6a,7,8,9,13b-hexahydro-7-methyl-, (6aS-trans)- [CAS]	27220-47-9			
ecopipam	Prosta-8,13-dien-1-oic acid, 11,15-dihydroxy-9-(1-oxobutoxy)-, butyl ester, (11Alpha,13E,15S)- [CAS]	112108-01-7	EP 230270	Anorectic/Antiobesity	Obesity
ecraprost		136892-64-3	EP 423697	Vasodilator, peripheral	Peripheral vascular disease
<b>Ectylurea</b>	9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, 2-(3-hydroxypropoxy)-, (1Alpha,2R,3S,5Z,7E)- [CAS]	95-04-5			
ED-71	3H-Pyrazol-3-one, 2,4-dihydro-5-methyl-2-phenyl- [CAS]	104121-92-8	EP 184206	Osteoporosis treatment	Osteoporosis
edaravone		89-25-8	JP 62108814	Neuroprotective	Infarction, cerebral
<b>Edatrexate</b>		80576-83-6			
<b>Edetate Calcium</b>		62-33-9			
<b>Disodium</b>		139-33-3			
<b>Edetate Disodium</b>		64-02-8			
<b>Edetate Sodium</b>		150-38-9			
<b>Edetate Trisodium</b>					
edonentan	Butanamide, N-[[2'-[[4,5-dimethyl-3-isoxazolyl]amino]sulfonyl]-4-(2-oxazolyl)][1,1'-biphenyl]-2-yl]methyl]-N,3,3-trimethyl-, monohydrate	210891-04-6		Cardio stimulant	Heart failure
edotreotide	[N-[2-[4,7-Bis[(carboxy-kappaO)methyl]-10-(carboxymethyl)-1,4,7,10-tetraazacyclododec-1-yl-kappaN1,kappaN4,kappaN10]acetyl]-D-phenylalanyl-L-cysteiny-L-tyrosyl-D-tryptophyl-L-lysyl-L-threonyl-L-cysteiny-L-threoninol cyclic (2-7)-disulfidato(3-yl)yttrium	204318-14-9	US 6183721	Anticancer, hormonal	Cancer, lung, small cell
edoxudine	Uridine, 2'-deoxy-5-ethyl- [CAS]	15176-29-1	GB 1170565	Antiviral, other	Infection, herpes virus, general
<b>Edrecolomab</b>		156586-89-9			
<b>Edrophonium</b>		116-38-1			
Efalith	Butanedioic acid, lithium salt [CAS]	16090-09-8		Antipruritic/inflamm, allergic	Eczema, seborrhoeic



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efaproxiral	Propanoic acid, 2-[4-[2-{3,5-dimethylphenyl}amino]-2-oxoethyl]phenoxy]-2-methyl- [CAS]	131179-95-8	US 5705521	Radio/chemosensitizer	Cancer, brain
efavirenz	2H-3,1-Benzoxazin-2-one, 6-chloro-4-(cyclopropylethynyl)-1,4-dihydro-4-(trifluoromethyl)-, (S)- [CAS]	154598-52-4	WO 9403440	Antiviral, anti-HIV	Infection, HIV/AIDS
efetirizine	[2-[4-[Bis(p-fluorophenyl)methyl]-1-piperazinyl]ethoxy]acetic acid	150756-35-7 70052-12-9	GB 2311940	Antiallergic, non-asthma	Allergy, general
efornithine	DL-Ornithine, 2-(difluoromethyl)- [CAS]	67037-37-0	US 4413141	Protozoacide, dermal, topical	Infection, trypanosomiasis, African, Histiocytism
<b>Efloxate</b>		119-41-5			
eflucimibe	Benzeneacetamide, Alpha-(dodecylthio)-N-(4-hydroxy-2,3,5-trimethylphenyl)- (S)- [CAS]	202340-45-2		Hypolipaeamic/Antiatherosclerosis	Hyperlipidaemia, general
efonidipine	3-pyridinecarboxylic acid, 5-(5,5-dimethyl-1,3,2-dioxaphosphorinan-2-yl)-1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, 2-(phenyl(methyl)amino)ethyl ester, P-oxide [CAS]	111011-53-1 111011-63-3 111011-76-8	EP 230944	Antihypertensive, other	Hypertension, general
EGIS-7229	5-Chloro-4-[3-[N-[2-(3,4-dimethoxyphenyl)ethyl]-N-methylamino]propylamino]-3(2H)-pyridazinone fumarate [CAS]	150800-12-7 190333-92-7	DE 4243381	Antiarrhythmic	Arrhythmia, general
eglumegad	Bicyclo[3.1.0]hexane-2,6-dicarboxylic acid, 2-amino-, (1S,2S,5R,6S)- [CAS]	176199-48-7 209216-09-1		Anxiolytic	Anxiety, general
egualen	1-Azulenenesulfonic acid, 3-ethyl-7-(1-methylethyl)-	97683-31-3 99287-30-6	EP 147915	Anticancer	Ulcer, gastric
<b>Eicosapentaenoic Acid</b>		10417-94-4			
elarofiban	3-Pyridinepropanoic acid, β-[(3R)-1-[1-oxo-3-(4-piperidinyl)propyl]-3-piperidinyl]carbonylamino]-, (βS)- [CAS]	198958-88-2	WO 9741102	Antithrombotic	Thrombosis, general
<b>Elcatonin</b>		60731-46-6			
<b>Eledoisin</b>		69-25-0			
eletriptan	1H-Indole, 3-((1-methyl-2-pyrrolidinyl)methyl)-5-(2-(phenylsulfonyl)ethyl)- (R)- [CAS]	143322-58-1	US 5607951	Antimigraine	Migraine

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<b>Elgodipine</b>		119413-55-7			
<b>Ellagic Acid</b>		476-66-4			
<b>Elliptinium</b>		58337-35-2			
<b>Eltoprazine</b>		98224-03-4			
eivucitabine	β-L-2',3'-Didehydro-2',3'-dideoxy-5-fluorocytidine	181785-84-2		Antiviral, other	Infection, hepatitis-B virus
elzasonan	(2Z)-4-(3,4-dichlorophenyl)-2-[2-(4-methylpiperazin-1-yl)benzylidene]thiomorpholin-3-one monohydrochloride- [CAS]	220322-05-4 361343-20-6		Antidepressant	Depression, general
<b>Embelin</b>		550-24-3			
<b>Embramine</b>		3565-72-8			
emedastine	1H-Benzimidazole, 1-(2-ethoxyethyl)-2-(hexahydro-4-methyl-1H-1,4-diazepin-1-yl)- (E)-2-butenedioate (1:2) [CAS]	87233-61-2 87233-62-3	EP 79545	Antiallergic, non-asthma	Rhinitis, allergic, general
<b>Emepronium</b>		3614-30-0			
<b>Emetine</b>		483-18-1			
<b>Emitefur</b>		110690-43-2			
EMM-210525	17Alpha-Acetoxy-6Alpha-methyl-19-nor-1β,2β-dihydrocyclopropa[1,2]pregn-4-ene-3,20-dione+Estra-1,3,5(10)-triene-3,17-diol(17β)			Formulation, fixed-dose combinations	Hormone replacement therapy
<b>Emodin</b>		518-82-1			
emorfazone	3(2H)-Pyridazinone, 4-ethoxy-2-methyl-5-(4-morpholinyl)- [CAS]	38957-41-4	JP 7224030 WO 9806722	Anti-inflammatory Male sexual dysfunction	Impotence
EMR-62203					
emtricitabine	2(1H)-Pyrimidinone, 4-amino-5-fluoro-1-(2-(hydroxymethyl)-1,3-oxathiolan-5-yl)-, (2R-cis)- [CAS]	143491-57-0	WO 9214743	Antiviral, anti-HIV	Infection, HIV/AIDS
<b>Emylcamate</b>		78-28-4			
enalapril	L-Proline, 1-[N-{1-(ethoxycarbonyl)-3-phenylpropyl}-L-alanyl]-, (S)-, (Z)-2-butenedioate [CAS]	76095-16-4	US 4374829	Antihypertensive, renin system	
<b>Enalaprilat</b>		76420-72-9			
<b>Enallypropymal</b>		1861-21-8			

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Encainide		66778-36-7			
Enciprazine		68576-86-3			
Endralazine		39715-02-1			
enfenamic acid	Benzoic acid, 2-[(2-phenylethyl)amino]- [CAS]	23049-93-6	IN 103066	Anti-inflammatory	Anaesthesia
enflurane	Ethane, 2-chloro-1-(difluoromethoxy)-1,1,2-trifluoro- [CAS]	13838-16-9	US 3469011	Anaesthetic, inhalation	
Enilconazole		35554-44-0			
Eniluracil		59989-18-3			
ENMD-0995	S-3-amino-phthalidoglutaramide		US 5712291	Anticancer, other	Cancer, myeloma
Enocitabine		55726-47-1			
Enol-3-IPA	1H-Indole-3-propanoic acid, Alpha-oxo- [CAS]	392-12-1	EP 106813	Hypnotic/Sedative	Insomnia
enoxacin	1,8-Naphthyridine-3-carboxylic acid, 1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)- [CAS]	74011-58-8 9005-49-6 9041-08-1	US 4359578 EP 40144	Quinolone antibacterial Antithrombotic	Infection, general Thrombosis, venous
enoxaparin	Heparin, [CAS]		59948	Cardio stimulant	Heart failure
enoximone	2H-Imidazol-2-one, 1,3-dihydro-4-methyl-5-[4-(methylthio)benzoyl]- [CAS]	77671-31-9 471-53-4	EP		
Enoxolone	4,5-Heptadienoic acid, 7-[3-hydroxy-2-(3-hydroxy-4-phenoxy-1-butenyl)-5-oxocyclopentyl]-, methyl ester, [1Alpha,2Beta(1E,3R*),3Alpha]- [CAS]	73121-56-9	GB 2025431	Prostaglandin	Ulcer, duodenal
enprostil					
enrasentan	1H-Indene-2-carboxylic acid, 1-(1,3-benzodioxol-5-yl)-2,3-dihydro-3-(2-(2-hydroxyethoxy)-4-methoxyphenyl)-5-propoxy-, (1S-(1Alpha,2Beta,3Alpha))- [CAS]	167256-08-8	US 5817693	Antihypertensive, other	Hypertension, pulmonary
entacapone	2-Propenamide, 2-cyano-3-(4,5-dihydroxy-3-nitrophenyl)-N,N-diethyl- [CAS]	130929-57-6	EP 426468	Antiparkinsonian	Parkinson's disease
entecavir	6H-Purin-6-one, 2-amino-1,9-dihydro-9-((1S,3R,4S)-4-hydroxy-3-(hydroxymethyl)-2-methylenecyclopentyl)- [CAS]	142217-69-4	EP 481754	Antiviral, other	Infection, hepatitis-B virus

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<u>Enviomycin</u>	3-Thiazolidineacetic acid, 5-(2-methyl-3-phenyl-2-propenylidene)-4-oxo-2-thioxo-, (E,E)- [CAS]	33103-22-9			
epalrestat	L-lysine-cis-5,8,11,14,17-elcosapentanoate with L-lysine-cis-4,7,10,13,16,19-doahexanoate	82159-09-9	EP 47109	Symptomatic antidiabetic	Neuropathy, diabetic
Epavir	L-ascorbic acid 2-[3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-1-benzopyran-6-yl]-hydrogen phosphate/potassium- [CAS]			Antiviral, other	Infection, herpes simplex virus
EPC-K1	1-Propanone, 1-(4-ethylphenyl)-2-methyl-3-(1-piperidinyl)- [CAS]	127061-56-7	EP 127471	Neuroprotective	Infarction, cerebral
eperisone		64840-90-0	US 3995047	Muscle relaxant	Spastic paralysis
epervudine	Uridine, 2'-deoxy-5-(1-methylethyl)- [CAS]	60136-25-6	DE 2918260	Antiviral, other	Infection, herpes simplex virus
<u>Ephedrine</u>		299-42-3			
<u>Epicillin</u>		26774-90-3			
<u>Epimestrol</u>		7004-98-0			
epinastine	1H-Dibenz[c,f]imidazo[1,5-a]zepin-3-amine, 9,13b-dihydro- [CAS]	80012-43-7	DE 3008944	Antiasthma	Asthma
epinephrine	(R)-4-[1-hydroxy-2-(methylamino)-ethyl]-1,2-benzenediol	51-43-4			
<u>Epirizole</u>		18694-40-1		Formulation, inhalable, dry powder	Anaphylaxis
epirubicin	5,12-Naphthacenedione, 10-[(3-amino-2,3,6-trideoxy-Alpha-L-arabino-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (8S-cis)- [CAS]	56390-09-1 56420-45-2 2363-58-8	GB 1457632	Anticancer, antibiotic	
<u>Epitiostanol</u>	Pregn-4-ene-7,21-dicarboxylic acid, 9,11-epoxy-17-hydroxy-3-oxo-, Gamma-lactone, methyl ester (7Alpha,11Alpha,17Alpha)- [CAS]				
epierenone		107724-20-9	EP 122232	Antihypertensive, diuretic	Hypertension, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
eplivanserlin	1-Propanone, 1-(2-fluorophenyl)-3-(4-hydroxyphenyl)-, O-(2-(dimethylamino)ethyl)oxime, (Z)-, (E)-2-butenedioate (2:1) (salt) [CAS]	130580-02-8	EP 373998	Anxiolytic	Schizophrenia
epoprostenol	Prosta-5,13-dien-1-oiic acid, 6,9-epoxy-11,15-dihydroxy-, (5Z,9Alpha,11Alpha,13E,15S)-[CAS]	35121-78-9 61849-14-7	DE 2720999	Prostaglandin	Hypertension, pulmonary
<b>Epostane</b>		80471-63-2			
<b>Eprazinone</b>		10402-90-1			
<b>Epristeride</b>		119169-78-7			
eprosartan	3-[2-Butyl-1-(4-carboxybenzyl)-1H-imidazol-5-yl]-2-(2-thienylmethyl)-2-(E)-propenoic acid	133040-01-4	EP 403159	Antihypertensive, renin system	Hypertension, general
<b>Eprozinol</b>		32665-36-4			
eptapirone	4-methyl-2-[4-(4-(pyrimidin-2-yl)-piperazino)-butyl]-2H,4H-1,2,4-triazin-3,5-dione	179756-85-5		Antidepressant	Depression, general
eptaplatin	Platinum, [(4R,5R)-2-(1-methylethyl)-1,3-dioxolane-4,5-dimethanamine-kappaN4,kappaN5][propanedioato(2-)-kappaO1,kappaO3]-, (SP-4-2)- [CAS]	146665-77-2	WO 9216539	Anticancer, alkylating	Cancer, lung, small cell
<b>Eptastigmine</b>		101246-68-8			
eptazocine	1,6-Methano-1H-4-benzazonin-10-ol, 2,3,4,5,6,7-hexahydro-1,4-dimethyl-, (1S)-[CAS]	72522-13-5	US 4082744	Analgesic, other	
<b>Eptifibotide</b>		188627-80-7			
<b>Equilenin</b>		517-09-9			
<b>Equilin</b>		474-86-2			
ERA-923	ERA 923 [CAS]	352233-89-7	EP 802183	Female contraceptive	Contraceptive, female
erdosteine	Acetic acid, [[2-oxo-2-[(tetrahydro-2-oxo-3-thienyl)amino]ethyl]thio]- [CAS]	84611-23-4	EP 61386	Respiratory	Respiratory disease, general
<b>Ergocornine</b>		564-36-3			
<b>Ergocorninine</b>		564-37-4			
<b>Ergoloid Mesylates</b>		8067-24-1			
<b>Ergonovine</b>		60-79-7			
<b>Ergosterol</b>		57-87-4			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
ergotamine	(5 $\alpha$ )-12'-Hydroxy-2'methyl-(phenylmethyl)ergotaman-3',6', 18-trione	113-15-5		Formulation, inhalable, systemic	Migraine
<b>Eritadenine</b>		23918-98-1			
ertotinib	4-Quinazolinamine, N-(3-ethynylphenyl)-, 6,7-bis(2-methoxyethoxy)-, monohydrochloride [CAS]	183319-69-9	WO 9630347	Anticancer, other	Cancer, lung, non-small cell
ertapenem	1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[[[(3S,5S)-5-[[[(3-carboxyphenyl)amino]carbonyl]-3-pyrrolidinyl]thio]-6-[(1R)-1-hydroxyethyl]-4-methyl-7-oxo-, [CAS]	153773-82-1 153832-46-3 7297-25-8 50276-98-7	WO 9315078	Beta-lactam antibiotic	Infection, GI tract
<b>Erythrityl Tetranitrate</b>					
<b>Erythrocentaurin</b>					
erythromycin acistrate	Erythromycin, 2'-acetate, octadecanoate (salt) [CAS]	96128-89-1	US 4599326	Macrolide antibiotic	Infection, general
<b>Erythromycin Estolate</b>		3521-62-8			
<b>Erythromycin</b>		23067-13-2			
<b>Glucoseptonate</b>		3847-29-8			
<b>Erythromycin</b>		134-36-1			
<b>Lactobionate</b>		643-22-1			
<b>Erythromycin</b>					
<b>Propionate</b>					
<b>Erythromycin Stearate</b>					
erythromycin stinoprate	Erythromycin, 2'-propanoate, compd. with N-acetyl-L-cysteine (1:1) [CAS]	84252-03-9	EP 57489	Macrolide antibiotic	Infection, respiratory tract, lower
erythromycin	Erythromycin [CAS]	114-07-8		Formulation, dermal, topical	Acne
<b>Erythrophleine</b>		36150-73-9			
<b>Esaprazole</b>		64204-55-3			
escitalopram	5-Isobenzofurancarboxitrile, 1-[3-(dimethylamino)propyl]-1-(4-fluorophenyl)-, 1,3-dihydro-, (S)- [CAS]	128196-01-0	EP 347066	Antidepressant	Depression, general
<b>Esculin</b>		531-75-9			
<b>Eseridine</b>		25573-43-7			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
esmolol	Benzenepropanoic acid, 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-, methyl ester, (+/-)- [CAS]	81147-92-4	US 4387103	Antihypertensive, adrenergic	Tachycardia, supraventricular
esomeprazole	bis (5-methoxy-2-(((4-methoxy-3,5-dimethyl-2-pyridinyl)methyl)sulfinyl))-1H-benzimidazolato	161973-10-0	US 5877192	Antispasmodic	Gastro-oesophageal reflux
estazolam	4H-[1,2,4]Triazolo[4,3-a][1,4]benzodiazepine, 8-chloro-6-phenyl- [CAS]	29975-16-4	US 3987052	Hypnotic/Sedative	
estradiol	Androst-4-en-3-one, 17-hydroxy-, (17 $\beta$ )- [CAS]	58-22-0	US 5460820	Formulation, transdermal, patch	Sexual dysfunction, female Menopausal symptoms, general
estradiol	Estra-1,3,5(10)-triene-3,17-diol (17 $\beta$ )- [CAS]	50-28-2	EP 430491	Formulation, transdermal, systemic	
estramustine	Estra-1,3,5(10)-triene-3,17-diol (17 $\beta$ )-, 3-[bis(2-chloroethyl)carbamate] 17- [CAS]	2998-57-4 4891-15-0 52205-73-9 50-27-1		Anticancer, alkylating	Cancer, prostate
<b>Estriol</b>					
estrogen			WO 9924041	Menopausal disorders	Menopausal symptoms, general
<b>Estrone</b>		53-16-7			
eszopiclone	1-Piperazinecarboxylic acid, 4-methyl- 6-(5-chloro-2-pyridinyl)-6,7-dihydro-7-oxo-5H-pyrrolo(3,4-b)pyrazin-5-yl ester (S)- [CAS]	138729-47-2 7681-79-0 90-54-0 314-35-2 185243-69-0 22668-01-5 7432-25-9 27511-99-5 442-16-0 58-54-8 520-77-4 74-55-5 304-84-7	US 5786357	Hypnotic/Sedative	Insomnia
<b>Etafedrine</b>					
<b>Etafenone</b>					
<b>Etamiphyllin</b>					
<b>Etanercept</b>					
<b>Etanidazole</b>					
<b>Etaqualone</b>					
<b>Eterobarb</b>					
<b>Ethacridine</b>					
<b>Ethacrynic Acid</b>					
<b>Ethadione</b>					
<b>Ethambutol</b>					
<b>Ethamivan</b>					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<u>Ethamsylate</u>	19-Norepregna-1,3,5(10)-trien-20-yne-3,17-diol, 3-(2-propanesulfonate), (17Alpha)-[CAS]	2624-44-4	DE 1949095	Formulation, modified-release, >24hr	Cancer, prostate
<u>Ethanalamine</u>		141-43-5			
<u>Ethaverine</u>		486-47-5			
<u>Ethchlorvynol</u>		113-18-8			
<u>Ethenzamide</u>		938-73-8			
<u>Ethiazide</u>		1824-58-4			
<u>Ethinamate</u>		126-52-3			
<u>Ethinyl Estradiol</u>		57-63-6			
ethinyl estradiol		28913-23-7			
<u>Ethionamide</u>		536-33-4			
<u>Ethisterone</u>		434-03-7			
<u>Ethoheptazine</u>		77-15-6			
<u>Ethopropazine</u>		522-00-9			
<u>Ethosuximide</u>		77-67-8			
<u>Ethotoin</u>		86-35-1			
<u>Ethoxzolamide</u>		452-35-7			
<u>Ethybenztropine</u>		524-83-4			
<u>Ethyl Alcohol</u>		64-17-5			
<u>Ethyl Biscoumacetate</u>		548-00-5			
<u>Ethyl Chloride</u>		75-00-3			
<u>Ethyl Dibunate</u>		5560-69-0			
<u>Ethyl Ether</u>		60-29-7			
ethyl icosapentate		86227-47-6			
ethyl loflazepate		29177-84-2			
<u>Ethyl Loflazepate</u>		29177-84-2			
<u>Ethylamine</u>	5,8,11,14,17-Eicosapentaenoic acid, ethyl ester, (all-Z)- [CAS] 1H-1,4-Benzodiazepine-3-carboxylic acid, 7-chloro-5-(2-fluorophenyl)-2,3-dihydro-2-oxo-, ethyl ester [CAS]	75-04-7	US 3657223	Anxiolytic	Anxiety, general
<u>Ethylene</u>		74-85-1			
<u>Ethylestrenol</u>		965-90-2			
<u>Ethylidene Dicoumarol</u>		1821-16-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Ethylmethylthiambutene</b>		441-61-2			
<b>Ethylmorphine</b>		76-58-4			
<b>Ethylnorepinephrine</b>		536-24-3			
<b>Ethynodiol</b>		1231-93-2			
ethynylcytidine	Uridine, 3'-C-ethynyl- [CAS]	180300-49-6	WO 9618636	Anticancer, antimetabolite	Cancer, general
<b>Etidocaine</b>		36637-18-0			
etidronate	Phosphonic acid, (1-hydroxyethylidene)bis- [CAS]	2809-21-4	US 4137309	Osteoporosis treatment	Osteoporosis
<b>Etidronic Acid</b>		7414-83-7			
<b>Etifelmin</b>		2809-21-4			
		341-00-4			
etifoxine	4H-3,1-Benzoxazin-2-amine, 6-chloro-N-ethyl-4-methyl-4-phenyl- [CAS]	21715-46-8	US 3725404	Anxiolytic	
<b>Etilefrin</b>		709-55-7			
etilevodopa	L-Tyrosine, 3-hydroxy-, ethyl ester [CAS]	37178-37-3	US 5354885	Antiparkinsonian	Parkinson's disease
etiprednol	androsta-1,4-diene-17-carboxylic acid, 17-[[[dichloroacetyl]oxy]-11-hydroxy-3-oxo-, ethyl ester, (11 $\beta$ , 17 $\alpha$ )-	199331-40-3		GI inflammatory/bowel disorders	Crohn's disease
<b>Etiroxate</b>		17365-01-4			
<b>Etizolam</b>		40054-69-1			
etodolac	Pyranol[3,4-b]indole-1-acetic acid, 1,8-diethyl-1,3,4,9-tetrahydro- [CAS]	41340-25-4	US 3939178	Antiarthritic, other	Arthritis, osteo
<b>Etodroxizine</b>		17692-34-1			
etofenamate	Benzoic acid, 2-[[3-(trifluoromethyl)phenyl]amino]-, 2-(2-hydroxyethoxy)ethyl ester [CAS]	30544-47-9	GB 1285400	Anti-inflammatory, topical	Inflammation, general
etofibrate	3-Pyridinecarboxylic acid, 2-[2-(4-chlorophenoxy)-2-methyl-1-oxopropoxy]ethyl ester [CAS]	31637-97-5	US 3723446	Hypolipaeamic/Antiatherosclerosis	
<b>Etofylline</b>		519-37-9			
etofylline clofibrate	Propanoic acid, 2-(4-chlorophenoxy)-2-methyl-, 2-(1,2,3,6-tetrahydro-1,3-dimethyl-2,6-dioxo-7H-purin-7-yl)ethyl ester [CAS]	54504-70-0	DE 2308826	Hypolipaeamic/Antiatherosclerosis	
<b>Etofylline Nicotinate</b>		13425-39-3			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Etoglucid</b>	18,19-Dinorpregn-4-en-20-yn-3-one, 13-ethyl-17-hydroxy-11-methylene, (17Alpha)-[CAS]	1954-28-5		Formulation, implant	Contraceptive, female
<b>Etomidate</b>		33125-97-2			
<b>Etomidoline</b>		21590-92-1			
<b>Etonitazene</b>		911-65-9			
etonogestrel	Furo[3',4':6,7]naphtho[2,3-d]-1,3-dioxol-6(5aH)-one, 9-[(4,6-O-ethylidene-β-D-glucopyranosyl)oxy]-5,8,8a,9-tetrahydro-5-(4-hydroxy-3,5-dimethoxyphenyl)-, [5R-[5Alpha,5aβ,8aAlpha,9β(R*)]]- [CAS]	33419-42-0	GB 1205966	Anticancer, other	Cancer, testicular
<b>Etoposide</b>					
etoposide phosphate		117091-64-2	EP 302473	Anticancer, other	Cancer, testicular
etoricoxib		202409-33-4	WO 9803484	Antiarthritic, other	Arthritis, osteo
<b>Etoxadrol</b>	2,4,6,8-Nonatetraenoic acid, 9-(4-methoxy-2,3,6-trimethylphenyl)-3,7-dimethyl-, ethyl ester, (all-E)- [CAS]	28189-85-7	US 4215215	Antipsoriasis	
<b>Etozolin</b>		73-09-6			
etretnate		54350-48-0			
<b>Etryptamine</b>		2235-90-7			
<b>Etymemazine</b>	Manganese, chloro[[2,2'-(1,2-ethanediybis[(nitrilo-kappaN)methyldiylne]]bis(6-methoxyphenolato-kappaO)]]-, (SP-5-13)-[CAS]	523-54-6	US 6046188	Cardiovascular	Unspecified
<b>Eucatropine</b>		100-91-4			
<b>Eugenol</b>		97-53-0			
<b>EUK-134</b>		81065-76-1			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
EUK-189		314-13-6	US 6046188	Radio/chemoprotective	Chemotherapy-induced injury, general
<b>Evan's Blue</b>					
everolimus	Rapamycin, 42-O-(2-hydroxyethyl)- [CAS]	159351-69-6	WO 9409010	Immunosuppressant	Transplant rejection, general
exalamide	Benzamide, 2-(hexyloxy)- [CAS]	53370-90-4	GB 726786	Antifungal	Infection, fungal, general
<b>Exametazime</b>		105613-48-7			
	10H,13H-Benzo[de]pyrano[3',4':6,7]indolizino[1,2-b]quinoline-10,13-dione, 1-amino-9-ethyl-5-fluoro-1,2,3,9,12,15-hexahydro-9-hydroxy-4-methyl-, (1S,9S)-, [CAS]	171335-80-1			
exatecan	Androsta-1,4-diene-3,17-dione, 6-methylene- [CAS]	107868-30-4	DE 3622841	Anticancer, other	Cancer, pancreatic
exemestane		52479-85-3		Anticancer, hormonal	Cancer, breast
<b>Exifone</b>					
exisulind	1H-Indene-3-acetic acid 5-fluoro-2-methyl-1-((4-(methylsulfonyl)phenyl)methylene)-, (Z)- [CAS]	59973-80-7		Anticancer, other	Polyp
<b>Exosurf®</b>		99732-49-7			
	2-Azetidinone, 1-(4-fluorophenyl)-3-[(3S)-3-(4-fluorophenyl)-3-hydroxypropyl]-4-(4-hydroxyphenyl)-, (3R,4S)- [CAS]	163222-33-1	US 5846966	Hypolipaeic/Antiatherosclerosis	Hypercholesterolaemia
ezetimibe		9001-28-9			
<b>Factor IX</b>		9001-27-8			
<b>Factor VIII</b>		9013-56-3			
<b>Factor XIII</b>					
fadolmidine	1H-Inden-5-ol, 2,3-dihydro-3-(1H-imidazol-4-ylmethyl)-, monohydrochloride [CAS]	189353-32-0	WO 9712874	Analgesic, other	Pain, general
<b>Fadrozole</b>		102676-47-1			
falecalcitriol	9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, 26,26,26,27,27,27-hexafluoro-, (1Alpha,3beta,5Z,7E)- [CAS]	83805-11-2	JP 03099022	Osteoporosis treatment	Hyperparathyroidism
famciclovir	1,3-Propanediol, 2-[2-(2-amino-9H-purin-9-yl)ethyl]-, diacetate (ester)- [CAS]	104227-87-4	JP 61085388	Antiviral, other	Infection, gynaecological

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famotidine	Propanimidamide, 3-[[[2-[(aminiminomethyl)amino]-4-thiazolyl]methyl]thio]-N-(aminosulfonyl)- [CAS]	76824-35-6	US 4283408	Anticancer	Ulcer, duodenal
fampridine	4-pyridinamine	504-24-5		Neuroprotective	Spinal cord injury
fandofloxacin	3-Quinolincarboxylic acid, 6-fluoro-1-(5-fluoro-2-pyridinyl)-1,4-dihydro-7-(4-methyl-1-piperazinyl)-4-oxo, [CAS]	164150-85-0 164150-99-6 114432-13-2	US 5496947	Quinolone antibacterial	Infection, urinary tract
Fantofarone					
faropenem daloxate	(5R,6S)-6-[1(R)-Hydroxyethyl]-2-[2(R)-tetrahydrofuryl]-2-penam-3-carboxylic acid-5-methyl-2-oxo-1,3-dioxol-4-ylmethyl ester			Beta-lactam antibiotic	Infection, general
faropenem	4-Thia-1-azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-7-oxo-3-(tetrahydro-2-furanyl)-, [5R-[3(R*),5Alpha,6Alpha(R*)]]-[CAS]	122547-49-3	EP 410727	Beta-lactam antibiotic	Infection, ocular
fasidotril	L-Alanine, N-[(2S)-3-(acetylthio)-2-(1,3-benzodioxol-5-ylmethyl)-1-oxopropyl]-, phenylmethyl ester [CAS]	135038-57-2	EP 419327	Antihypertensive, renin system	Hypertension, general
fasudil	1H-1,4-Diazepine, hexahydro-1-(5-isoquinolinylsulfonyl)- [CAS]	103745-39-7 105628-07-7 49564-56-9	EP 187371	Neuroprotective	Vasospasm, general
Fazadinium Bromide	2,4,6(1H,3H,5H)-Pyrimidinetrione, 1-[2-[(aminocarbonyloxy]-3-butoxypropyl]-5-ethyl-5-phenyl- [CAS]	13246-02-1 3102-00-9	US 3075983	Psychostimulant	
febarbamate					
Febuprol					
febuxostat	5-Thiazolecarboxylic acid, 2-[3-cyano-4-(2-methylpropoxy)phenyl]-4-methyl- [CAS]	144060-53-7 123618-00-8	WO 9209279	Antigout	Hyperuricaemia
Fedotozine	1,3-Propanediol, 2-phenyl-, dicarbamate [CAS]				
felbamate	[1,1'-Biphenyl]-4-acetic acid [CAS]	25451-15-4	US 4868327	Antiepileptic	Epilepsy, general
felbinac	3,5-Pyridinedicarboxylic acid, 4-(2,3-dichlorophenyl)-1,4-dihydro-2,6-dimethyl-, ethyl methyl ester [CAS]	5728-52-9	EP 127840	Anti-inflammatory, topical	
felodipine		72509-76-3 56-59-7	US 4264611	Antihypertensive, other	Hypertension, general
Felypressin					



Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Femoxetine	[1,1'-Biphenyl]-4-butanoic acid, Gamma-oxo- [CAS]	59859-58-4	US	Anti-inflammatory	
Fenbenicillin		1926-48-3			
fenbufen		36330-85-5			
Fenbutrazate		4378-36-3			
Fencamfamine		1209-98-9			
Fencamine		28947-50-4			
Fenclozic Acid		17969-20-9			
Fendiline		13042-18-7			
Fendosal		53597-27-6			
Fenethylline		3736081			
Fenfluramine	Propanoic acid, 2-[4-(4-chlorobenzoyl)phenoxy]-2-methyl-, 1-methylethyl ester [CAS]	458-24-2	EP	Formulation, modified-release, <=24hr	Hyperlipidaemia, general
Fenipentol		583-03-9			
fenofibrate		26129-32-8			
		49562-28-9			
		67227-56-9			
		67227-57-0			
fenoldopam		31879-05-7			
Fenoprofen		13392-18-2			
Fenoterol					
fenoverine	10H-Phenothiazine, 10-[[4-(1,3-benzodioxol-5-ylmethyl))-1-piperazinyl]acetyl]-[CAS]	37561-27-6	FR	Antispasmodic	
Fenoxazoline		4846-91-7			
Fenoxedil		54063-40-0			
Fenzolone		15302-16-6			
Fenpentadiol		15687-18-0			
Fenpiprane		3540-95-2			
Fenpiverinium Bromide		125-60-0			
Fenproporex		15686-61-0			
Fenquizone		20287-37-0			
fenretinide	Retinamide, N-(4-hydroxyphenyl)- [CAS]	65646-68-6	BE	Anticancer, other	Cancer, breast

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Fenspiride</b>	Propanamide, N-phenyl-N-[1-(2-phenylethyl)-4-piperidinyl]- [CAS]	5053066		Formulation, transmucosal, systemic	Anaesthesia, adjunct
fentanyl		437-38-7			
<b>Fentiazac</b>		18046-21-4			
<b>Fenticlor</b>		97-24-5			
fenticonazole	1H-Imidazole, 1-[2-(2,4-dichlorophenyl)-2-[[4-(phenylthio)phenyl]methoxy]ethyl]- [CAS]	72479-28-6 73151-29-8	US 4221803	Antifungal	Infection, gynaecological
<b>Fentonium Bromide</b>		5868064			
		36981-91-6			
fepradinol	Benzenemethanol, Alpha-[[2-hydroxy-1,1-dimethylethyl)amino]methyl]-, (+/-)- [CAS]	67704-50-1 63075-47-8		Anti-inflammatory, topical	
<b>Feprazone</b>		30748-29-9			
<b>Ferric Sodium Edetate</b>		15708-41-5			Respiratory distress syndrome, adult
ferrioxamine B			WO 9426263	Septic shock treatment	
<b>Ferrocholine</b>		1336-80-7			
<b>Ferrous Gluconate</b>		299-29-6			
ferumoxylol	Polyglucose sorbitol carboxymethyl ether-coated non-stoichiometric magnetite			Imaging agent	Diagnosis, cancer
fesoterodine	2-((1R)-3-(bis(1-methylethyl)amino)-1-phenylpropyl)-4-(hydroxymethyl)Phenyl ester, (2E)-2-butenedioate (1:1) (Salt) - [CAS]	286930-03-8		Urological	Incontinence
	Benzenecetic acid, 4-[1-hydroxy-4-[4(hydroxydiphenyl)methyl])-1-piperidinyl]butyl]-Alpha,Alpha-dimethyl-, [CAS]	153439-40-8 83799-24-0 138452-21-8	US 5375693 CA 2132416	Antiallergic, non-asthma Vulnery	Rhinitis, allergic, seasonal Wound healing
fexofenadine					
<b>Fibrostat</b>	Spiro(4H-1-benzopyran-4,4'-imidazolidine)-2-carboxamide, 6-fluoro-2,3-dihydro-2',5'-dioxo-, (2S-cis)-, [CAS]				
fidarestat		136087-85-9	EP 418834	Symptomatic antidiabetic	Neuropathy, diabetic

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fiduxosin	8-Phenyl-3-[4-[(3aR,9bR)-1,3a,4,9b-tetrahydro-9-methoxy[1]benzopyrano[3,4-c]pyrrol-2(3H)-yl]butyl]pyrazino[2',3':4,5]thieno[3,2-d]pyrimidine-2,4(1H,3H)-dione	208993-54-8		Prostate disorders	Benign prostatic hyperplasia
finasteride	4-Azaandrost-1-ene-17-carboxamide, N-(1,1-dimethylethyl)-3-oxo-, (5A)pha, 17β-[CAS]	98319-26-7	EP 155096	Prostate disorders	Benign prostatic hyperplasia
finrozole	Benzonitrile, 4-(3-(4-fluorophenyl)-2-hydroxy-1-(1H-1,2,4-triazol-1-yl)-propyl)-[CAS]	160146-16-7 34161-24-5	EP 476944	Urological	Urinary retention
<b>Fipexide</b>	N-(4-Acetyl-1-piperazinyl)-4-fluorobenzamide monohydrate- [CAS]	133920-70-4 146426-40-6	WO 9101979	Cognition enhancer	Alzheimer's disease
flavoxate	4H-1-Benzopyran-8-carboxylic acid, 3-methyl-4-oxo-2-phenyl-, 2-(1-piperidinyl)ethyl ester [CAS]	15301-69-6 3717-88-2	US 2921070	Urological	
flecainide	Benzamide, N-(2-piperidinylmethyl)-2,5-bis(2,2,2-trifluoroethoxy)-, [CAS]	54143-55-4 54143-56-5		Formulation, modified-release, <=24hr	Fibrillation, atrial
floxacin	3-Quinolonecarboxylic acid, 6,8-difluoro-1-(2-fluoroethyl)-1,4-dihydro-7-(4-methyl-1-piperazinyl)-4-oxo- [CAS]	79660-53-0 79660-72-3 98206-10-1	US 4398029	Quinolone antibacterial	Infection, general
<b>Flesinoxan</b>	2H-Benzimidazol-2-one, 1,3-dihydro-1-(2-(4-(3-(trifluoromethyl)phenyl)-1-piperazinyl)ethyl)- [CAS]	167933-07-5		Reproductive/gonadal, general	Sexual dysfunction, female
flibanserin	Benzoic acid, 2-[[8-(trifluoromethyl)-4-quinolinyl]amino]-, 2,3-dihydroxypropyl ester [CAS]	23779-99-9	US 3644368	Analgesic, NSAID	
fluctafenine	5-Oxa-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(difluoromethyl)thio]acetyl]amino]-3-[[[1-(2-hydroxyethyl)-1H-tetrazol-5-yl]thio]methyl]-7-methoxy-8-oxo-, (6R-cis)-[CAS]	92823-03-5 99665-00-6	EP 128536	Cephalosporin, injectable	Infection, general
flomoxef					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Flopropione</b>	Androst-5-en-17-one, 16-fluoro-, (16 $\alpha$ )- [CAS]	2295-58-1	EP 246650	Cardiovascular	Keratosi
<b>Florantyrone</b>		519-95-9			
<b>Flosequinan</b>		76568-02-0			
<b>Floxacinil</b>		5250-39-5			
<b>Floxuridine</b>		50-91-9			
<b>Fluacizine</b>		30223-48-4			
<b>Fluanisone</b>	5'H-Pregna-1,4-dienol[17,16-d]oxazole-3,20-dione, 21-(acetyloxy)-9-fluoro-11-hydroxy-2'-methyl-, (11 $\beta$ ,16 $\beta$ )- [CAS]	1480-19-9	US 3461119	Antipruritic/inflamm, non-allergic	Infection, general
fluasterone		112859-71-9			
fluazacort		19888-56-3			
<b>Fluciloronide</b>		3693-39-8			
flucloxacillin	1H-1,2,4-Triazole-1-ethanol, Alpha-(2,4-difluorophenyl)-Alpha-(1H-1,2,4-triazol-1-ylmethyl)- [CAS]	1847-24-1	EP 96569	Antifungal	Infection, dermatological
fluconazole		34214-51-2			
<b>Flucytosine</b>		86386-73-4			
fludarabine	9H-Purin-6-amine, 2-fluoro-9-(5-O-phosphono- $\beta$ -D-arabinofuranosyl)- [CAS]	2022-85-7	US 4357324	Anticancer, antimetabolite	Cancer, leukaemia, chronic lymphocytic
<b>Fludeoxyglucose F<sub>18</sub></b>		75607-67-9			
<b>Fludiazepam</b>		21679-14-1			
<b>Fludrocortisone</b>		105851-17-0			
<b>Flufenamic Acid</b>	4H-Imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, 8-fluoro-5,6-dihydro-5-methyl-6-oxo-, ethyl ester [CAS]	3900-31-0	EP 27214	Neurological	
<b>Fluindione</b>		127-31-1			
flumazenil		530-78-9			
<b>Flumecinol</b>		957-56-2			
<b>Flumequine</b>		78755-81-4	EP 27214		
<b>Flumethasone</b>		56430-99-0			
<b>Flumethiazide</b>		42835-25-6			
		2135-17-3			
		148-56-1			

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flunarizine	Piperazine, 1-[bis(4-fluorophenyl)methyl]-4-(3-phenyl-2-propenyl)-(E)- [CAS]	30484-77-6 52468-60-7 27848-84-6	GB 1268710	Antimigraine	
flunisolide	Pregna-1,4-diene-3,20-dione, 6-fluoro-11,21-dihydroxy-16,17-[(1-methylethylidene)bis(oxy)]-, (6 $\alpha$ ,11 $\beta$ ,16 $\alpha$ )- [CAS]	3385-03-3	US 3124571	Antiasthma	Rhinitis, allergic, general
flunitrazepam	2H-1,4-Benzodiazepin-2-one, 5-(2-fluorophenyl)-1,3-dihydro-1-methyl-7-nitro- [CAS]	1622-62-4 66934-18-7 67-73-2	US 3116203	Hypnotic/Sedative	
Flunoxaprofen					
Fluocinolone Acetonide					
Fluocinonide		356-12-7			
Fluocortin Butyl		41767-29-7			
Fluocortolone		152-97-6			
Fluorescein		2321-07-5			
Fluoresone		2924-67-6			
Fluorometholone		426-13-1			
Fluorosalan		4776061			
fluorouracil	2,4(1H,3H)-Pyrimidinedione, 5-fluoro- [CAS]	51-21-8		Formulation, transdermal, enhanced	Keratosiis
fluoxetine	Benzenepropanamine, N-methyl-Gamma-[4-(trifluoromethyl)phenoxy]-, (+/-)- [CAS]	54910-89-3 56296-78-7 76-43-7	US 4314081	Antidepressant	Depression, general
Fluoxymesterone		2709-56-0			
Flupentixol		2119-75-7			
Fluperolone		69-23-8			
Fluphenazine	Carbamic acid, [2-amino-6-[[[4-fluorophenyl)methyl]amino]-3-pyridinyl]-, ethyl ester [CAS]	33400-45-2 56995-20-1 75507-68-5 1255-35-2	US 4481205	Analgesic, other	Pain, post-operative
flupirtine					
Fluprednidene Acetate					
Fluprednisolone		53-34-9			
Fluproquazone		40507-23-1			

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<b>Flurandrenolide</b>	[1,1'-Biphenyl]-4-acetic acid, 2-fluoro-	1524-88-5	US 3793457	Anti-inflammatory	Infection, respiratory tract, lower
<b>Flurazepam</b>	Alpha-methyl- [CAS]	17617-23-1			
flurbiprofen	Erythromycin, 8-fluoro-mono(ethyl butanedioate) (ester)- [CAS]	5104-49-4	EP 56291	Macrolide antibiotic	
flurithromycin		82730-23-2			
<b>Flurogestone</b>		2529-45-5		Anticancer, hormonal	
<b>Flurothyl</b>		333-36-8			
<b>Fluoxetine</b>		406-90-6			
<b>Fluspirilene</b>		1841-19-6			
flutamide	Propanamide, 2-methyl-N-(4-nitro-3-(trifluoromethyl)phenyl)- [CAS]	13311-84-7	US 4329364		
flutazolam	Oxazolo[3,2-d][1,4]benzodiazepin-6(5H)-one, 10-chloro-11b-(2-fluorophenyl)-2,3,7,11b-tetrahydro-7-(2-hydroxyethyl)- [CAS]	27060-91-9	US 3905956	Anxiolytic	
fluticasone	Androsta-1,4-diene-17-carbothioic acid, 6,9-difluoro-11,17-dihydroxy-16-methyl-3-oxo-, S-(fluoromethyl) ester, (6Alpha,11β,16Alpha,17Alpha)- [CAS]	80474-14-2 90566-53-3	GB 1253368	Formulation, inhalable, solution	Asthma
flutoprazepam	2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(cyclopropylmethyl)-5-(2-fluorophenyl)-1,3-dihydro- [CAS]	25967-29-7			
flutrimazole	1H-Imidazole, 1-[(2-fluorophenyl)(4-fluorophenyl)phenylmethyl]- [CAS]	119006-77-8	EP 352352	Anxiolytic Antifungal	Psychosis, general Infection, dermatological
<b>Flutropium Bromide</b>		63516-07-4			
fluvastatin	6-Heptenoic acid, 7-[3-(4-fluorophenyl)-1-(1-methylethyl)-1H-indol-2-yl]-3,5-dihydroxy-, monosodium salt, [R*, S*-(E)]-(±)- [CAS]	93957-55-2 93957-54-1	EP 114027	Hypolipaeamic/Antiatherosclerosis	Hypercholesterolaemia Depression, general, Obsessive-compulsive disorder
fluvoxamine	1-Pentanone, 5-methoxy-1-[4-(trifluoromethyl)phenyl]-O-(2-aminoethyl)oxime, (E)- [CAS]	54739-18-3 61718-82-9	GB 1535226	Antidepressant	
<b>Folic Acid</b>		59-30-3			
<b>Folinic Acid</b>		58-05-9			
<b>Fomepizole</b>		7554-65-6			



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fominoben	Benzamide, N-[3-chloro-2-[[methyl[2-(4-morpholinyl)-2-oxoethyl]amino]methyl]phenyl]- [CAS]	18053-31-1 24600-36-0	US 3661903	Respiratory stimulant	Eczema, general
<b>Fomivirsen</b>		144245-52-3			
<b>Fomocaine</b>		17692-39-6			
<b>Fonazine</b>		7456-24-8			
fondaparinux	Alpha-D-Glucopyranoside, methyl O-2-deoxy-6-O-sulfo-2-(sulfoamino)-Alpha-D-glucopyranosyl-(1-4)-O-2-deoxy-3,6-di-glucopyranuronosyl-(1-4)-O-2-deoxy-2-O-sulfo-2-(sulfoamino)-Alpha-D-glucopyranosyl-(1-4)-O-2-O-sulfo-Alpha-L-idopyranuronosyl-(1-4)-2-deoxy-2-(sulfoamino)-6-(hydrogen sulfate) [CAS]	104993-28-4 114870-03-0		Anticoagulant	Thrombosis, venous
<b>Formebolone</b>		2454117			
formestane	Androst-4-ene-3,17-dione, 4-hydroxy-[CAS]	566-48-3	EP 346953	Anticancer, hormonal	Cancer, breast
<b>Formocortol</b>		2825-60-7			
formoterol	Formamide, N-[2-hydroxy-5-[1-hydroxy-2-[[[2-(4-methoxyphenyl)-1-methylethyl]amino]ethyl]phenyl]-, (R*,R*)-(+/-)- [CAS]	43229-80-7 73573-87-2	GB 1415256	Antiasthma	Asthma
fosamprenavir	Carbamic acid, ((1S,2R)-3-(((4-aminophenyl)sulfonyl)(2-methylpropyl)amino)-1-(phenylmethyl)-2-(phosphonoxy)propyl)- C-((3S)-tetrahydro-3-furanyl ester, [CAS]	226700-81-8 34156-56-4 4428-95-9 63585-09-1	US 4839445	Antiviral, anti-HIV	Infection, HIV/AIDS
foscarnet	Phosphinecarboxylic acid, dihydroxy-, oxide, trisodium salt [CAS]	522-40-7		Antiviral, other	Infection, cytomegalovirus
<b>Fosfestrol</b>					
fosfluconazole	2,4-difluoro-Alpha,Alpha-bis(1H-1,2,4-triazol-1-ylmethyl)benzyl alcohol, dihydrogen phosphate (ester)	194798-83-9 23155-02-4		Antifungal	Infection, fungal, general
fosfomycin	Phosphonic acid, (3-methyloxiranyl)-, (2R-cis)- [CAS]	26016-98-8	GB 1223923	Antibiotic, other	Infection, general

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fosfomycin trometamol <b>Fosfosal</b>	Phosphonic acid, (3-methyloxiranyl)-, (2R-cis)-, compd. with 2-amino-2-(hydroxymethyl)-1,3-propanediol (1:1)- [CAS]	78964-85-9	EP 27597	Antibiotic, other	Infection, urinary tract
		6064-83-1			
fosinopril fosphenytoin	L-Proline, 4-cyclohexyl-1-[[[2-methyl-1-(1-oxopropoxy)propoxy](4-phenylbutyl)phosphiny]acetyl]-, (2Alpha,4S)- [CAS] 2,4-Imidazolidinedione, 5,5-diphenyl-3-[[[phosphonoxy)methyl]- [CAS]	88889-14-9	EP 63896	Antihypertensive, renin system	Hypertension, general Epilepsy, generalized, tonic-clonic
		98048-97-6			
		92134-98-0	US 4260769	Antiepileptic	
fotemustine <b>Fropenem</b>	Phosphonic acid, 1-[[[(2-chloroethyl)nitrosoamino]carbonyl]amino]ethyl]-, diethyl ester [CAS]	92118-27-9 106560-14-9	EP 117959	Anticancer, alkylating	Cancer, melanoma
frovatriptan <b>Fructose-1,6-diphosphate</b>	1H-Carbazole-6-carboxamide, 2,3,4,9-tetrahydro-3-(methylamino)-, (R)- [CAS]	158747-02-5 57-48-7 488-69-7	WO 9922730	Antimigraine	Migraine
FTC	2(1H)-Pyrimidinone, 4-amino-5-fluoro-1-(2-(hydroxymethyl)-1,3-oxathiolan-5-yl)- (4R)			Antiviral, anti-HIV	Infection, HIV/AIDS
FTY-720	1,3-Propanediol, 2-amino-2-(4-octylphenyl)ethyl)-hydrochloride [CAS]	162359-56-0	WO 9408943	Immunosuppressant	Transplant rejection, general
fudosteine	Alanine, 3-((3-hydroxypropyl)thio)- [CAS]	13189-98-5	US 5047428	Antitussive	Cough
fulvestrant	Estra-1,3,5(10)-triene-3,17-diol, 7-[9-[[[4,4,5,5,5-pentafluoropentyl)sulfinyl]nonyl], (7Alpha,17S)- [CAS] 2,4,6,8-Decatetraenedioic acid, mono[5-methoxy-4-[2-methyl-3-(3-methyl-2-butenyl)oxiranyl]-1-oxaspiro[2.5]oct-6-yl] ester, [3R-[3Alpha,4Alpha(2R*,3R*),5S,6S(all-E)]]- [CAS]	129453-61-8	EP 346014	Anticancer, hormonal	Cancer, breast
fumagilline		23110-15-8		Protozoacide	Infection, GI tract

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<b>Fumagillin</b>		23110-15-8			
<b>Furaltadone</b>		139-91-3			
<b>Furazabol</b>		1239-29-8			
<b>Furazolidone</b>		67-45-8			
<b>Furazollum Chloride</b>		5118-17-2			
<b>Furonazide</b>		3460-67-1			
<b>furosemide</b>	Benzoic acid, 5-(aminosulfonyl)-4-chloro-2- [(2-furanyl)methyl]amino]- [CAS]	54-31-9		Formulation, modified-release, other	Hypertension, general
<b>Fursultiamine</b>		804-30-8			
<b>Furtrethonium</b>		7618-86-2			
<b>Fusidic Acid</b>		6/3/6990			
<b>G1, YM BioSciences</b>	1-(5-bromofur-2-yl)-2-bromo-2-nitroethene		WO 9804252	Antifungal	Infection, gynaecological
<b>G25</b>				Antimalarial	Infection, malaria
<b>GABA-A Alpha5 inverse agonist, Mer</b>			WO 0206285	Cognition enhancer	Alzheimer's disease
<b>gabapentin</b>	Cyclohexanecarboxylic acid, 1-(aminomethyl)- [CAS]	60142-96-3	US 4152326	Antiepileptic	Epilepsy, general
<b>gabexate</b>	Benzoic acid, 4-[[6- [(aminoiminomethyl)amino]-1- oxohexyl]oxy]-, ethyl ester, monomethanesulfonate [CAS]	39492-01-8 56974-61-9	US 3751447	GI inflammatory/bowel disorders	Pancreatitis
<b>gaboxadol</b>	Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7- tetrahydro- [CAS]	64603-91-4 127000-20-8	CA 1125288	Hypnotic/Sedative	Sleep disorder, general
<b>Gadobenate</b>					
<b>Dimeglumine</b>		138071-82-6			
<b>Gadobutrol</b>		131410-48-5			
<b>Gadodiamide</b>		80529-93-7			
<b>Gadopentetic Acid</b>		120066-54-8			
<b>Gadoteridol</b>		131069-91-5			
<b>Gadoversetamide</b>		135326-11-3			
<b>Gadoxetic Acid</b>					

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galantamine	(4aS,6R,8aS)-6-Hydroxy-3-methoxy-11-methyl-5,6,9,10,11,12-hexahydro-4aH-benzofuro[3a,3,2-e,f][2]benzazepine	357-70-0		Formulation, modified-release, other	Alzheimer's disease
<b>Galanthamine</b>					
galanubicin	$\beta$ -Alanine, 2-[4-[(2,6-dideoxy-2-fluoro-Alpha-L-talopyranosyl)oxy]-1,2,3,4,6,11-hexahydro-2,5,12-trihydroxy-7-methoxy-6,11-dioxo-2-naphthacenyl]-2-oxoethyl ester, [CAS]	140637-82-7 140637-86-1 65-29-2	EP 424899	Anticancer, antibiotic	Cancer, breast
<b>Gallamine Triethiodide</b>					
<b>Gallic Acid</b>	4H-Pyran-4-one, 3-hydroxy-2-methyl-, gallium complex	149-91-7			
gallium maltolate				Anticancer, other	Cancer, myeloma
gallium nitrate	Nitric acid, gallium salt [CAS]	13494-90-1	US 4529593	Osteoporosis treatment	Hypercalcaemia of malignancy
gallopamil	Benzeneacetone nitrile, Alpha-[3-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]propyl]-3,4,5-trimethoxy-Alpha-(1-methylethyl)-[CAS]	16662-47-8 56-12-2 38398-32-2	GB 1367677	Antianginal	Angina, general
<b><math>\gamma</math>-Aminobutyric Acid</b>					
<b>Ganaxalone</b>	6H-Purin-6-one, 2-amino-1,9-dihydro-9-[[2-hydroxy-1-(hydroxymethyl)ethoxy]methyl]-[CAS]	107910-75-8 82410-32-0	EP 49072	Antiviral, other	Infection, cytomegalovirus
ganciclovir					
ganirelix	[N-Ac-D-Nal,D-pCl-Phe D-Pal,D-hArg(Et)2,hArg(Et)2,D-Ala]GnRH- [CAS]	124904-93-4	EP 312052	Releasing hormones	Infertility, female
ganstigmine	Carbamic acid, (2-ethylphenyl)-, (3aS,8aS)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl ester,	223585-99-7	EP 1023297	Cognition enhancer	Alzheimer's disease

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
gantofiban	1-Piperazineacetic acid, 4-[[[(5R)-3-{4-[[imino[(methoxycarbonyl)amino]methyl]phenyl]-2-oxo-5-oxazolidinyl]methyl}]-ethyl]ester [CAS]	183547-57-1	EP 741133	Antithrombotic	Thrombosis, general
garenoxacin	3-Quinolonecarboxylic acid, 1-cyclopropyl-8-(difluoromethoxy)-7-((1R)-2,3-dihydro-1-methyl-1H-isoindol-5-yl)-1,4-dihydro-4-oxo-monomethanesulfonate [CAS]	223652-82-2		Quinolone antibacterial	Infection, respiratory tract, lower
gamocestim	5-73-macrophage inflammatory protein 2Alpha (human gene gro2)- [CAS]	246861-96-1		Radio/chemoprotective	Chemotherapy-induced injury, bone marrow, neutropenia
gatifloxacin	3-Quinolonecarboxylic acid, 1-cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-7-(3-methyl-1-piperazinyl)-4-oxo-, (+/-)- [CAS]	112811-59-3	EP 230295	Quinolone antibacterial	Infection, respiratory tract, general
<b>Gefarnate</b>		51-77-4			
gefitinib	4-Quinazolinamine, N-(3-chloro-4-fluorophenyl)-7-methoxy-6-(3-(4-morpholinyl)propoxy) [CAS]	184475-35-2	WO 9633980	Anticancer, other	Cancer, lung, non-small cell
gemcabene	6,6'-oxybis(2,2-dimethylhexanoate)	209789-08-2		Hypolipaeimic/Antiatherosclerosis	Hyperlipidaemia, general
gemcitabine	Cytidine, 2'-deoxy-2', 2'-difluoro-, [CAS]	122111-03-9			
		95058-81-4	GB 2136425	Anticancer, antimetabolite	Cancer, pancreatic
gemeprost	Prosta-2,13-dien-1-oic acid, 11,15-dihydroxy-16,16-dimethyl-9-oxo-, methyl ester, (2E,11Alpha,13E,15R)- [CAS]	64318-79-2	GB 1540427	Prostaglandin	
gemfibrozil	Pentanoic acid, 5-(2,5-dimethylphenoxy)-2,2-dimethyl-, [CAS]	25812-30-0	US 3674836	Hypolipaeimic/Antiatherosclerosis	Hyperlipidaemia, general
gemifloxacin	1,8-Naphthyridine-3-carboxylic acid, 7-(3-(aminomethyl)-4-(methoxyimino)-1-pyrrolidinyl)-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo- [CAS]	175463-14-6	US 5869670	Quinolone antibacterial	Infection, respiratory tract, general
gentamicin	Gentamicin [CAS]	1403-66-3		Formulation, implant	Infection, general
<b>Gentian Violet</b>		548-62-9			
<b>Gentiopticin</b>		20831-76-9			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Gentisic Acid</b>		490-79-9			
<b>Gepefrine</b>		18840-47-6			
gepirone	2,6-Piperidinedione, 4,4-dimethyl-1-[4-[4-(2-pyrimidinyl)-1-piperazinyl]butyl]- [CAS]			Formulation, modified-release, other	Depression, general
gestodene	18,19-Dinorpregna-4,15-dien-20-yn-3-one, 13-ethyl-17-hydroxy-, (17Alpha)- [CAS]	109852-02-0 60282-87-3	GB 1569135	Formulation, fixed-dose combinations	Contraceptive, female
gestodene + ethinylest	18,19-Dinorpregna-4,15-dien-20-yn-3-one, 13-ethyl-17-hydroxy-, (17Alpha) mixt with 19-Norpregna-1,3,5(10)-trien-20-yne-13,17-diol (17Alpha)			Formulation, modified-release, >24hr	Contraceptive, female
<b>Gestonorone Caproate</b>		1253-28-7			
<b>Gestrinone</b>		16320-04-0			
<b>γ-Hydroxybutyrate</b>		591-81-1			
	(4S)-11-[(E)-{(1,1-dimethylethoxy)imino]methyl]-4-ethyl-4-hydroxy-1-12-dihydro-14H-pyran[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H)-dione	292618-32-7		Anticancer, other	Cancer, brain
gimatecan		24870-04-0			
<b>Giractide</b>		4562-36-1			
<b>Gitoxin</b>					
	N,N'-Bis[2-[N-[2-(N2,N5-dimethyl-DL-lysylamino)-ethyl]carbamoyl]1H-indol-6-yl]-1H-indole-2,5-dicarboxamide			Antifungal	Infection, fungal, general
GL-406349		3820-67-5			
<b>Glafenine</b>	L-Glutamic acid, polymer with L-alanine, L-lysine and L-tyrosine, [CAS]	147245-92-9 28704-27-0	WO 5800808	Multiple sclerosis treatment	Multiple sclerosis, relapsing-remitting
glatiramer		26944-48-9			
<b>Glibornuride</b>	Benzenesulfonamide, N-[[[hexahydrocyclopenta[c]pyrrol-2(1H)-yl]amino]carbonyl]-4-methyl- [CAS]				
gliclazide		21187-98-4	GB 1153982	Antidiabetic	Diabetes, Type II



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glimepiride	1H-Pyrrole-1-carboxamide, 3-ethyl-2,5-dihydro-4-methyl-N-[2-[4-[[[(4-methylcyclohexyl)amino]carbonyl]amino]sulfonyl]phenyl]ethyl]-2-oxo- [CAS]	93479-97-1	WO 9303724	Antidiabetic	Diabetes, Type II
<b><math>\gamma</math>-Linolenic Acid</b>		506-26-3			
glipizide	Pyrazinecarboxamide, N-[2-[4-[[[(cyclohexylamino)carbonyl]amino]sulfonyl]phenyl]ethyl]-5-methyl- [CAS]	29094-61-9	US 3669966	Antidiabetic	
	Benzenesulfonamide, N-[[cyclohexylamino)carbonyl]-4-[2-(3,4-dihydro-7-methoxy-4,4-dimethyl-1,3-dioxo-2(1H)-isoquinolinyl)ethyl]- [CAS]	33342-05-1	GB 1277847	Antidiabetic	Diabetes, general
gliquidone	3-Isioxazolecarboxamide, N-[2-[4-[[[(cyclohexylamino)carbonyl]amino]sulfonyl]phenyl]ethyl]-5-methyl- [CAS]	24477-37-0		Antidiabetic	Diabetes, general
glisolamide		25046-79-1			
<b>Glisoxepid</b>		52443-21-7			
<b>Glucametacin</b>		87-74-1			
<b>Glucoheptonic Acid</b>		526-95-4			
<b>Gluconic Acid</b>		29031-19-4			
glucosamine	D-Glucose, 2-amino-2-deoxy-, [CAS]	3416-24-8	DE 1953689	Antiarthritic, other	Arthritis, osteo
<b>Glucosulfone</b>		554-18-7			
glufosfamide	$\beta$ -D-Glucopyranose, 1-(N,N'-bis(2-chloroethyl)phosphorodiamidate)- [CAS]	132682-98-5	DE 3835772	Anticancer, alkylating	Cancer, general
<b>Glutamic Acid</b>		56-86-0			
<b>Glutaraldehyde</b>		111-30-8			
<b>Glutethimide</b>		77-21-4			
<b>Glyburide</b>		10238-21-8			
<b>Glybuthiazol(e)</b>		535-65-9			
<b>Glybuzole</b>		1492-02-0			
<b>Glycerol</b>		56-81-5			
<b>Glycocyamine</b>		352-97-6			
<b>Glycol Salicylate</b>		87-28-5			
<b>Glyconiazide</b>		3691-74-5			

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Glycopyrrolate	N-acetylglucosaminyl-N-acetylmuramyl dipeptide	596-51-0	US	Anti-infective, other	Infection, general
Glyhexamide		451-71-8			
Glymidine		339-44-6			
Glypinamide		1228-19-9			
GMDP					
Gold Sodium Thiomaleate	Luteinizing hormone-releasing factor-(pig), 6-[O-(1,1-dimethylethyl)-D-serine]-10-deglycinamide-, 2-(aminocarbonyl)hydrazide [CAS]	12244-57-4	US	Releasing hormones	Cancer, prostate
Gold Sodium Thiosulfate		10233-88-2			
goserelin		65807-02-5			
GPI-1485		186452-09-5			
GPI-5693					
Graftskin	L-Proline, 1-(3,3-dimethyl-1,2-dioxopentyl)-, 3-(3-pyridinyl)propyl ester [CAS] 2-(Phosphonomethyl)pentanedioic acid		US	Antiparkinsonian Analgesic, other	Parkinson's disease Pain, neuropathic
granisetron		107007-99-8			
		109889-09-0			
Grepafloxacin		119914-60-2			
griseofulvin	Spiro[benzofuran-2(3H),1'-[2]cyclohexane]-3,4'-dione, 7-chloro-2',4,6-trimeth-oxy-6'methyl-, (1'S-trans)- [CAS]	126-07-8	EP	Antiemetic	Chemotherapy-induced nausea and vomiting
Guaiacol		90-05-1			
Guaiapate		852-42-6			
Guaiazulene		489-84-9			
Guaifenesin		93-14-1			
guaimesal	4H-1,3-Benzodioxin-4-one, 2-(2-methoxyphenoxy)-2-methyl- [CAS]	81674-79-5	GB	Formulation, demal, topical	Infection, dermatological
Guamecycline		16545-11-2			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Guanabenz	Pregna-4,17(20)-diene-3,16-dione [CAS]	5051-62-7	EP	Hypolipaeamic/Antiatherosclerosis	
Guanadrel		40580-59-4			
Guanethidine		55-65-2			
Guanfacine		29110-47-2			
Guanoxabenz		24047-25-4			
Guanoxan		2165-19-7			
gugulipid		95975-55-6	447706		
Gusperimus		104317-84-2			
	(Z)-2-Chlorofumaric acid 1-[3-{-[6,7-dimethoxy-2(S)-methyl-1(R)-{3,4,5-trimethoxybenzyl)-1,2,3,4-tetrahydroisoquinolinium-2-yl}propyl}]				
GW-280430A	[2S,3S,5R]-2-[3,5-difluorophenyl]-3,5-dimethyl-2-morpholinol			Muscle relaxant	Anaesthesia, adjunct
GW-320659				Anorectic/Antiobesity	Obesity
	(+)-R-2-{3-[N-(2-Benzo[1,4]dioxanylmethyl)amino]-1-propyl}-3(2H)-pyridazinone hydrochloride		US	Prostate disorders	Benign prostatic hyperplasia
GYKI-16084		1394-02-1	US		
Hachimycin		23092-17-3			
Halazepam		3093-35-4			
Halcinonide					
	Pregna-1,4-diene-3,20-dione, 21-chloro-6,9-difluoro-11-hydroxy-16-methyl-17-(1-oxopropoxy)-, (6Alpha,11beta,16beta)- [CAS]				
halobetasol	9-Phenanthrenemethanol, 1,3-dichloro-Alpha-[2-(dibutylamino)ethyl]-6-(trifluoromethyl)- [CAS]	66852-54-8	US	Antipsoriasis	Psoriasis
		36167-63-2	EP	Antimalarial	Infection, malaria
halofantrine		69756-53-2			
	Pregna-1,4-diene-3,20-dione, 2-chloro-6,9-difluoro-11,17,21-trihydroxy-16-methyl-, (6Alpha,11beta,16Alpha)- [CAS]				
halometasone		50629-82-8	US	Antipruritic/inflamm, allergic	
Haloperidol		52-86-8	US		
Halopredone		57781-14-3			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Haloprogin	2(R)-Acetamido-N-benzyl-3-methoxypropionamide	777-11-7	WO 9733861	Antiepileptic	Epilepsy, general
Halopropane		679-84-5			
Halothane		151-67-7			
Haloxazolam		59128-97-1			
harkoseride	16Alpha-Bromo-3β-hydroxy-5Alpha-androstane-17-one		WO 9714376	Antiviral, anti-HIV Musculoskeletal	Infection, HIV/AIDS Regeneration, bone
HE-2000					
Healos					
Hematoporphyrin		14459-29-1			
Hepronicate		7237-81-2			
Heptabarbital		509-86-4			
Heptaminol		372-66-7			
Hetacillin		3511-16-8			
Hetastarch		9004-62-0			
Hexachlorophene		70-30-4			
Hexadimethrine Bromide		28728-55-4			
Hexafluorenum Bromide		317-52-2			
Hexamethonium		60-26-4			
Hexamidine		3811-75-4			
Hexapropymate		358-52-1			
Hexedine		5980-31-4			
Hexestrol		84-16-2			
Hexestrol Bis(β-diethylaminoethyl ether)		2691-45-4			
Hexethal		144-00-3			
Hexetidine		141-94-6			
Hexobarbital		56-29-1			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Hexobendine	Hexend [CAS]	54-03-5	US 5407428	Plasma substitute	Surgery adjunct
Hexocyclium Methyl Sulfate		115-63-9			
Hexoprenaline		3215-70-1			
Hexend		235746-51-7			
Hexylcaine		532-76-3			
HF-0299	11b-hydroxy androstenedione			Osteoporosis treatment	Osteoporosis
HGP-2	Benzeneacetic acid, 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-, 2-tricyclo[3.3.1.1 <sup>3,7</sup> ]dec-1-ylethyl ester, (2Z)-2-butenedioate (1:1) (salt) [CAS]	121009-31-2		Antiglaucoma	Glaucoma
HGP-6 <sup>a</sup>	8-Azoniabicyclo[3.2.1]octane, 3-(3-ethoxy-1,3-dioxo-2-phenylpropoxy)-8,8-dimethyl-, (3-endo)-, methyl sulfate [CAS]	113932-41-5		Antiepileptic	Epilepsy, general
Hydroamin	Hydroamin- [CAS]	120250-44-4	EP 0493468	Vasoprotective, systemic	Cancer, melanoma
histamine	histamine	51-45-6		Anticancer, immunological	
Histapyrrodine		493-80-1			
histrelin	Luteinizing hormone-releasing factor (pig), 6-[1-(phenylmethyl)-D-histidine]-9-(N-ethyl-L-prolinamide)-10-deglycinamide- [CAS]	76712-82-8	EP 217659	Releasing hormones	Precocious puberty
HM-101	HM 101 [CAS]	217311-70-1		Osteoporosis treatment	Osteoporosis
HMN-214	(E)-4-[2-(p-methoxybenzenesulfonamide)-phenyl]ethenylpyridine-1-oxide			Anticancer, other	Cancer, general
Homatropine	Glycinamide, N-acetyl-L-norleucyl-L-glutamyl-L-histidyl-D-phenylalanyl-L-arginyl-D-tryptophyl- [CAS]	87-00-3	EP 759770	Analgesic, other	Pain, post-operative
Homocamfin		535-86-4			
Homochlorcyclizine		848-53-3			
Hopantenic Acid		18679-90-8			
HP-228		172617-89-9			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Hyperzine A	Hyaluronic acid [CAS]	102518-79-6		Formulation, other	Restenosis
hyaluronan		9004-61-9			
Hycanthone		3105-97-3			
Hydnocarpic Acid		459-67-6			
Hydralazine		86-54-4			
Hydrastine		118-08-1			
Hydrastinine	Morphinan-6-one, 4,5-epoxy-3-hydroxy-17-methyl-, (5Alpha)- [CAS]	6592-85-4		Formulation, modified-release, other	Pain, general
Hydrochlorothiazide		58-93-5			
hydrocodone		466-99-9			
Hydrocortamate		125-29-1			
		76-47-1			
		74050-20-7			
hydrocortisone	Pregn-4-ene-3,20-dione, 21-(acetyloxy)-11-hydroxy-17-(1-oxopropoxy)-, (11β)-[CAS]	50-23-7	DE 2826257	Dermatological	Unspecified
hydrocortisone butyrate propio	Pregn-4-ene-3,20-dione, 11-hydroxy-17-(1-oxobutoxy)-21-(1-oxopropoxy)-, (11β)-[CAS]	72590-77-3	DE 2910899	Antipruritic/inflamm, allergic	
Hydroflumethiazide	Morphinan-6-one, 4,5-epoxy-3-hydroxy-17-methyl-, (5Alpha)-, mixt with acetamide, N-(4-hydroxyphenyl)-, mixt with morphinan-6-one, 17-(cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxy-, (5Alpha)-	135-09-1		Formulation, fixed-dose combinations	Pain, general
hydromorphone		103-90-2			
Hydroquinidine		16590-41-3			
Hydroquinine		466-99-9			
Hydroquinone		1435-55-8			
Hydroxocobalamin		522-66-7			
Hydroxyamphetamine		123-31-9			
Hydroxychloroquine		13422-51-0			
Hydroxydione		1518-86-1			
Hydroxypethidine		118-42-3			
Hydroxyphenamate		53-10-1			
		468-56-4			
		50-19-1			



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Hydroxypropyl Cellulose		9004-64-2			
Hydroxystilbamidine		495-99-8			
Hydroxytetracaine		490-98-2			
Hydroxyzine		68-88-2			
<i>Hylan G-F 20</i>					
Hymecromone		90-33-5			
hyoscyamine	benzeneacetic acid, Alpha(hydroxymethyl)-, 8-methyl-8-azabicyclo [3.2.1]oct-3-yl ester, [3(S)-endo]	101-31-5		Formulation, oral, orally-disintegrating	Ulcer, GI, general
hypericin	Phenanthro[1,10,9,8-opqr]perylene-7,14-dione, 1,3,4,6,8,13-hexahydroxy-10,11-dimethyl- [CAS]	548-04-9		Anticancer, other	Cancer, brain
IACFT		180468-34-2			
ibandronic acid	Phosphonic acid, [1-hydroxy-3-(methylpentylamino)propylidene] bis- [CAS]	114084-78-5	EP 252504	Osteoporosis treatment	Hypercalcaemia of malignancy
ibopamine	Propanoic acid, 2-methyl-, 4-[2-(methylamino)ethyl]-1,2-phenylene ester- [CAS]	66195-31-1	GB 1551661	Cardiostimulant	Heart failure
ibopamine	Propanoic acid, 2-methyl-, 4-[2-(methylamino)ethyl]-1,2-phenylene ester- [CAS]	66195-31-1		Formulation, mucosal, topical	Surgery adjunct
Ibritumomab Tiuxetan		206181-63-7			
ibrolipim	Phosphonic acid, [[4-[[[(4-bromo-2-cyanophenyl)amino]carbonyl]phenyl]methyl]-, diethyl ester [CAS]	133208-93-2	EP 402033	Hypolipaeic/Antiatherosclerosis	Hypertriglyceridaemia
ibudilast	1-Propanone, 2-methyl-1-[2-(1-methylethyl)pyrazolo[1,5-a]pyridin-3-yl]- [CAS]	50847-11-5	EP 215438	Antiasthma	Asthma
Ibufenac		1553-60-2			
ibuprofen piconol	Benzenecacetic acid, Alpha-methyl-4-(2-methylpropyl)-, 2-pyridinylmethyl ester [CAS]	64622-45-3	DE 2658610	Antipruritic/inflamm, non-allergic	Eczema, contact

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
ibuprofen	Benzeneacetic acid, Alpha-methyl-4-(2-methylpropyl)- [CAS]	15687-27-1		Formulation, modified-release, other	Inflammation, general
<b>ibuproxam</b>		<b>53648-05-8</b>			
ibutilide	Methanesulfonamide, N-[4-[4-(ethylheptylamino)-1-hydroxybutyl]phenyl]-, (+/-)-, [CAS]	122647-31-8 122647-32-9	JP 60239458	Antiarrhythmic	Fibrillation, atrial
ICA-17043			US 6288122	Antisickling	Anaemia, sickle cell
icodextrin	Dextrin- [CAS]	9004-53-9		Urological	Renal failure
idarubicin	5, 12-Naphthacenedione, 9-acetyl-7-[(3-amino-2,3,6-trideoxy-Alpha-L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,9,11-trihydroxy-, (7S-cis)- [CAS]	58957-92-9 86189-66-4	US 4471052	Anticancer, antibiotic	Cancer, leukaemia, acute lymphocytic
<b>idazoxan</b>		<b>79944-58-4</b>			
IdB-1016	2-(2,3-dihydro-2-(4-hydroxy-3-methoxyphenyl)-3-(hydroxymethyl)-1,4-benzodioxin-6-yl)-2,3-dihydro-3,5,7-trihydroxy-4H-1-benzopyran-4-one phosphatidylcholine complex	134499-06-2	EP 209038	Anticancer, hormonal	Cancer, ovarian
idebenone	2,5-Cyclohexadiene-1,4-dione, 2-(10-hydroxydecyl)-5,6-dimethoxy-3-methyl- [CAS]	58186-27-9	EP 58057	Neuroprotective	Ischaemia, cerebral
IDN-5109	4-Hexenoic acid, 3-[[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-5-methyl-, (3aS,4R,7R,8aS,9S,10aR,12aS,12bR,13S,13aS)-7,12a-bis(acetyloxy)-13-(benzoyloxy)-3a,4,7,8,8a,9,10,10a,12,12a,12b,13-dodecahydro-9-hydroxy-5,8a,14,14-tetramethyl-2,8-dioxo-6,13a-methano-13aH-oxeto [2",3",5',6'] benzo[1,2:4,5] cyclodecā [1,2-d] dioxyl-4-yl ester, 2R,3S) [CAS]	186348-05-0 116057-75-1	US 5284591	Anticancer, other	Cancer, colorectal
<b>Idoxifene</b>					

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idraparinux	Alpha-D-Glucopyranoside, methyl O-2,3,4-tri-O-methyl-6-O-sulfo-Alpha-D-glucopyranosyl-(1-4)-O-2,3-di-O-methyl-β-D-glucopyranuronosyl-(1-4)-O-2,3,6-tri-O-sulfo-Alpha-D-glucopyranosyl-(1-4)-O-2,3-di-O-methyl-Alpha-L-idopyranuronosyl-(1-4)-, tris(hydrogen sulfate) nonasodium salt [CAS]	149920-56-9	AU 698456	Antithrombotic	Thrombosis, venous
idrocilamide	2-Propenamide, N-(2-hydroxyethyl)-3-phenyl- [CAS]	6961-46-2	US 3659014	Anti-inflammatory, topical	
ifenprodil	(7)-2-(4-benzyl piperidino)-1-p-hydroxyphenylpropanol tartrate	23210-58-4 23210-56-2	US 3509164	Neuroprotective	
ifosfamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,3-bis(2-chloroethyl)tetrahydro-2-oxide [CAS]	3778-73-2	US 3732340	Anticancer, alkylating	Cancer, lung, general
iguratifmod	N-[3-(Formylamino)-4-oxo-6-phenoxy-4H-chromen-7-yl] methanesulfonamide	123663-49-0	DE 3834204	Antiarthritic, other	Arthritis, rheumatoid
ilaprazole	1H-Benzimidazole, 2-(((4-methoxy-3-methyl-2-pyridinyl) methyl)sulfinyl)-5-(1H-pyrrol-1-yl)- [CAS]	172152-36-2	US 5703097	Antiulcer	Ulcer, GI, general
ilomastat	Butanediamide, N4-hydroxy-N1-(1-(1H-indol-3-yl)methyl)-2-(methylamino)-2-oxoethyl)-2-(2-methylpropyl)-, (S-(R*, S*))-[CAS]	142880-36-2	US 5892112	COPD treatment	Emphysema, smoking-related
iloperidone	Ethanone, 1-[4-[3-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]propoxy]-3-methoxyphenyl]- [CAS]	133454-47-4	US 5776963	Neuroleptic	Schizophrenia
iloprost trometamol	Pentanoic acid, 5-[hexahydro-5-hydroxy-4-(3-hydroxy-4-methyl-1-octen-6-ynyl)-2(1H)-pentalenylidene]- [CAS]	78919-13-8	DE 3417638	Prostaglandin	Peripheral vascular disease
ILX23-7553	1Alpha,25-Hydroxy-16-yne vitamin D3			Anticancer, other	Cancer, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
imatinib	4-((Methyl-1-piperazinyl)methyl)-N-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-phenyl]benzamide methanesulfonate	152459-95-5	US 5521184	Anticancer, other	Cancer, leukaemia, chronic myelogenous
imidapril	4-Imidazolidinecarboxylic acid, 3-[2-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]-1-methyl-2-oxo-, [4S-[3[R*(R*),4R*]]]- [CAS]	89371-37-9 89396-94-1	EP 95163	Antihypertensive, renin system, Musculoskeletal	Hypertension, general, Cachexia
imidazole salicylate	Benzoic acid, 2-hydroxy-, compd. with 1H-imidazole (1:1) [CAS]	36364-49-5	US 4329340	Anti-inflammatory	Pain, general
imipenem	1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 6-(1-hydroxyethyl)-3-[[2-[[[(iminomethyl)amino]ethyl]thio]-7-oxo-, [5R-[5Alpha,6Alpha(R*)]]]- [CAS]	64221-86-9 74431-23-5 81129-83-1	GB 1570990	Beta-lactam antibiotic	Infection, general
Imipramine		50-49-7			
Imipramine N-Oxide		6829-98-7			
imiquimod	1H-Imidazo[4,5-c]quinolin-4-amine, 1-(2-methylpropyl)- [CAS]	99011-02-6	EP 145340	Antiviral, other	Infection, human papilloma virus
Imolamine		318-23-0			
implitapide	Benzeneacetamide, Alpha-cyclopentyl-4-((2,4-dimethyl-9H-pyrido(2,3-b)indol-9-yl)methyl)-N-((1R)-2-hydroxy-1-phenylethyl)- (AlphaS)- [CAS]	177469-96-4	EP 705831	Hypolipaeamic/Antiatherosclerosis	Atherosclerosis
Improsulfan		13425-98-4			
Inaperisone		99323-21-4			
incadronate	Phosphonic acid, [[(cycloheptylamino)methylene]bis-, [CAS]	138330-18-4		Musculoskeletal	Hypercalcaemia of malignancy
Incadronic Acid		124351-85-5			
Indalpine		63758-79-2			
Indanazoline		40507-78-6			
indapamide	4-chloro-N-(2-methylindolin-1-yl)-3-sulfamoylbenzamide	26807-65-8	GB 1203691	Antihypertensive, diuretic	Hypertension, general
Indecainide		74517-78-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
indeloxazine	Morpholine, 2-[(1H-inden-7-yloxy)methyl]- [CAS]	60929-23-9 65043-22-3	JP 52083773	Cognition enhancer	Alzheimer's disease
Indeloxazine		65043-22-3 30190-87-5			
indenolol	2-Propanol, 1-[1H-inden-4(or 7)-yloxy]-3-[[1-methylethyl)amino]- [CAS]	60607-68-3 68906-88-7	GB 1290343	Antihypertensive, adrenergic	
indinavir	D-erythro-Pentonamide, 2,3,5-trideoxy-N-(2,3-dihydro-2-hydroxy-1H-inden-1-yl)-5-(2-(((1,1-dimethylethyl)amino)carbonyl)-4-(3-pyridinylmethyl)-1-piperazinyl)-2-(phenylmethyl), [1S-[1Alpha(R*),2Alpha]],- [CAS]	150378-17-9 157810-81-6	EP 0541168	Antiviral, anti-HIV	Infection, HIV/AIDS
indiplon	Acetamide, N-methyl-N-(3-(2-(thienylcarbonyl)pyrazolo(1,5-a) pyrimidin-7-yl)phenyl)- [CAS]	325715-02-4	US 6399621	Hypnotic/Sedative	Insomnia
indisetron	1H-Indazole-3-carboxamide, N-(3,9-dimethyl-3,9-diazabicyclo(3.3.1)non-7-yl)-, diendo- [CAS]	160472-97-9		Antiemetic	Nausea and vomiting, general
indisulam	1,4-Benzenedisulfonamide, N=(3-chloro-1H-indol-7-yl)- [CAS]	165668-41-7		Anticancer, other	Cancer, lung, non-small cell
Indobufen		63610-08-2			
Indocyanine Green		3599-32-4			
indometacin	1H-Indole-3-acetic acid, 1-(4-chlorobenzoyl)-5-methoxy-2-methyl- [CAS]	53-86-1		Formulation, modified-release, other	Inflammation, general
Indoprofen		31842-01-0			
indoramin	Benzamide, N-[1-[2-(1H-indol-3-yl)ethyl]-4-piperidinyl]- [CAS]	26844-12-2 38821-52-2	GB 1218570	Antihypertensive, adrenergic	
Inducterm			US 5993810	Labour inducer	Labour, induction
Infliximab		170277-31-3			
Inosine Pranobex		36703-88-5			
Inositol		87-89-8			
Inositol Niacinate		6556112			
Iobenguane		80663-95-2			
Iobenzamic Acid		3115057			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
lobitridol	Iodine [CAS]	136949-58-1		Formulation, oral, other	Fibrocystic breast disorder
locarmic Acid		10397-75-8			
locetamic Acid		16034-77-8			
lodamide		440-58-4			
iodine		7553-56-2			
lodipamide	5-Chloro-7-iodo-8-quinolinol	606-17-7		Cognition enhancer	Alzheimer's disease
lodixanol		92339-11-2			
lodoalphionic Acid		577-91-3			
iodochlorhydroxyquin		130-26-7			
lodoform		75-47-8			
lodopyracet		300-37-8			
lodopyrrole		87-58-1			
lodoquinol		83-73-8			
lofetamine <sup>123</sup> I		75917-92-9			
loglycamic Acid		2618-25-9			
lohexol		66108-95-0			
lomeglamic Acid		25827-76-3			
lomeprol		78649-41-9			
lopamidol		60166-93-0			
lopanoic Acid		96-83-3			
lopentol		89797-00-2			
lophenodylate		99-79-6			
lophenoxic Acid		96-84-4			
lopromide		73334-07-3			
loproncic Acid		41473-08-9			
lopydol		5579-92-0			
lopydone		5579-93-1			
lothalamic Acid		2276-90-6			
lotrolan		79770-24-4			
loversol		87771-40-2			
loxaglic Acid		59017-64-0			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
loxilan	(3R,4R)-(delta6)-THC-DMH-11-oic acid	107793-72-6	WO 9401429	Analgesic, other	Pain, neuropathic
IP-751					
ipidacrine		62732-44-9			
IPL-576092	Stigmastan-15-one, 22,29-epoxy-3,4,6,7,29-pentahydroxy-, (3Alpha,4B,5Alpha,6Alpha,7B,14B,22S)-[CAS]		US 6046185	Formulation, inhalable, solution	Chronic obstructive pulmonary disease
		137571-30-3			
		5587-89-3			
		56985-17-9			
ipratropium bromide	(endo, syn)-(±)-3-(3-Hydroxy-1-oxo-2-phenylpropoxy)-8-methyl-8-(1-methylethyl)-8-azoniabicyclo[3.2.1]octane	22254-24-6		Formulation, inhalable, topical	Asthma
ipratropium					
		7248-21-7			
iprazochrome	Hydrazinecarboxamide, 2-[1,2,3,6-tetrahydro-3-hydroxy-1-(1-methylethyl)-6-oxo-5H-indol-5-ylidene]- [CAS]		EP 214647	Haemostatic	Osteoporosis
ipriflavone		35212-22-7			
iprindole		5560-72-5			
iproclozide		3544-35-2			
iproniazid	4H-1-Benzopyran-4-one, 7-(1-methylethoxy)-3-phenyl- [CAS]	54-92-2			
ipsapirone		95847-70-4			
irbesartan	2-n-butyl-4-spirocyclopentane-1-[[[2'-tetrazol-5-yl)biphenyl-4-yl)methyl]-2-imidazolin-5-one	138402-11-6	WO 9114679	Antihypertensive, renin system	Hypertension, general
IRFI-042	Butanedioic acid, mono[2-[2-(acetylthio)ethyl]-2,3-dihydro-4,6,7-trimethyl-5-benzofuranyl] ester, (+/-)-[CAS]		US 5114966	Cardiovascular	Atherosclerosis
		134867-62-2			
IRFI-165	N-Cyclopentyl-1-methylimidazo[1,2-a]quinoxalin-4-amine	191349-26-5	EP 865442	Antidepressant	Depression, general
		485-43-8			
iridomyrmecin					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
irindalone	-Imidazolidinone, 1-[2-[4-[3-(4-fluorophenyl)-2,3-dihydro-1H-inden-1-yl]-1-piperazinyl]ethyl]-, (1R-trans)- [CAS]	104113-57-7 96478-43-2	EP 183349	Antidepressant	Depression, general
Irinotecan	Spiro[cyclopropane-1,5'-[5H]inden]-7'(6H)-one, 6'-hydroxy-2',4',6'-trimethyl-, (R)- [CAS]	97682-44-5			
irofulven		125392-76-9	US 5563176	Anticancer, other	Cancer, prostate
Iron Sorbitex		1338-16-5			
		57381-26-7			
irsogladine	1,3,5-Triazine-2,4-diamine, 6-(2,5-dichlorophenyl)- [CAS]	57381-28-9 57381-33-6	US 4657907	Antihypertensive, diuretic	Hypertension, general
IS-741	Cyclohexanecarboxamide, N-[2-[(ethylsulfonyl)amino]-5-(trifluoromethyl)-3-pyridinyl]- [CAS]	141283-87-6	EP 465913	GI inflammatory/bowel disorders	Pancreatitis
isaglitazone	2,4-Thiazolidinedione, 5-[[6-[(2-fluorophenyl)methoxy]-2-naphthalenyl]methyl]-[CAS]	161600-01-7	US 5594016 NZ 502362	Antidiabetic Immunosuppressant	Diabetes, Type II Transplant rejection, general
ISAbx-247					
Isbogrel		89667-40-3			
	D-Streptamine, O-6-amino-6-deoxy-Alpha-D-glucopyranosyl-(1-4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-β-L-arabinopyranosyl-(1-6)]-N1-(3-amino-2-hydroxy-1-oxopropyl)-2-deoxy-, (S)- [CAS]	58152-01-5 58152-03-7	US 4029882	Aminoglycoside antibiotic	Infection, dermatological
isepamicin		77-51-0			
Isoaminile		94-14-4			
Isobutyl p-Aminobenzoate					
Isocarboxazid		59-63-2			
		24168-96-5			
isoconazole	1-[2-(2,6-dichlorobenzoyloxy)-2-(2,4-dichlorophenyl)ethyl]	27523-40-6	GB 1244530	Antifungal	Infection, fungal, general
Isoetharine		530-08-5			

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isoflurothepin	1-Piperazineethanol, 4-[3-fluoro-10,11-dihydro-8-(1-methylethyl)dibenzo[b,f]thiepin-10-yl]-[CAS]	106819-39-0 106819-41-4 70931-18-9	GB 2010843	Neuroleptic	
isoflurane	Ethane, 2-chloro-2-(difluoromethoxy)-1,1,1-trifluoro- [CAS]	26675-46-7	US 3535388	Anaesthetic, inhalation	Anaesthesia
Isoflurophate		55-91-4			
Isoladol		530-34-7			
Isomethadone		466-40-0			
Isometheptene		503-01-5			
Isoniazid		54-85-3			
Isonixin		57021-61-1			
Isopromethazine		303-14-0			
Isopropamide Iodide		71-81-8			
Isopropyl Alcohol		67-63-0			
	5-Heptenoic acid, 7-(3,5-dihydroxy-2-(3-oxodecyl)cyclopentyl)-, 1-methylethylester, (1R-(1Alpha(Z), 2S,3Alpha,5Alpha))- [CAS]	120373-24-2	EP 289349	Prostaglandin	Glaucoma
isopropyl unoprostone		7683-59-2			
Isoproterenol		652-67-5			
Isosorbide		87-33-2			
isosorbide dinitrate	D-Glucitol, 1,4:3,6-dianhydro-, dinitrate [CAS]	16051-77-7		Formulation, modified-release, other	Angina, general
isosorbide mononitrate	D-Glucitol, 1,4:3,6-dianhydro-, 5-nitrate [CAS]	482-15-5		Formulation, modified-release, other	Angina, general
Isothipendyl		4759-48-2	US 4843096	Antiacne	Acne
isotretinoin	Retinoic acid, 13-cis- [CAS]	533-32-4			
Isovaleryl Diethylamide		55453-87-7			
Isoxepac		34552-84-6			
Isoxicam		395-28-8			
Isoxsuprine					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
isradipine	3,5-Pyridinedicarboxylic acid, 4-(4-benzofurazanyl)-1,4-dihydro-2,6-dimethyl-, methyl 1-methylethyl ester [CAS]	75695-93-1	GB 2037766	Antihypertensive, other	Hypertension, general
israpafant	6H-Thieno[3,2-f][1,2,4]triazolo[4,3-a][1,4]diazepine, 4-(2-chlorophenyl)-6,9-dimethyl-2-[2-{4-(2-methylpropyl)phenyl}ethyl]-[CAS]	117279-73-9	EP 268242 US 5447926	Antiasthma Formulation, mucosal, topical	Asthma Conjunctivitis
ITSV-403					
Itasetron	ITF 282 [CAS]	123258-84-4	GB 2115821	Antianaemic	Anaemia, general
ITF-282		93615-44-2			
itopride	Benzamide, N-[[4-{2-(dimethylamino)ethoxy}phenyl]methyl]-3,4-dimethoxy-, monohydrochloride [CAS]	122892-31-3	EP 306827	Gastroprokinetic	Gastritis
itraconazole	3H-1,2,4-Triazol-3-one, 4-[4-{4-[2-(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1-yl)methyl]-1,3-dioxolan-4-yl]methoxy}phenyl]-1-piperazinyl]phenyl]-2,4-dihydro-2-(1-methylpropyl)- [CAS]	84625-61-6	EP 6711	Antifungal	Infection, fungal, general
Ittramin		13445-63-1			
itriglumide	1-Naphthalenepropanoic acid, β-[2-{[2-(8-azaspiro[4.5]dec-8-ylcarbonyl)-4,6-dimethylphenyl]amino}-2-oxoethyl]-, (βR)-[CAS]	201605-51-8	WO 9800404	Anxiolytic	Anxiety, general
iturelix	D-Alaninamide N-acetyl-3-(2-naphthalenyl)-D-alanyl-4-chloro-D-phenylalanyl-3-(3-pyridinyl)-D-alanyl-L-seryl-N6-(3-pyridinylcarbonyl)-L-lysyl-N6-(3-pyridinylcarbonyl)-D-lysyl-L-leucyl-N6-(1-methylethyl)-L-lysyl-L-prolyl- [CAS]	112568-12-4	WO 8901944	Fertility enhancer	Infertility, female
ivabradine	7,8-dimethoxy-3-([(1S)(4,5-dimethoxybenzocyclobutan-1-yl)methyl]methylamino]propyl)-1,3,4,5-tetrahydro-2H-benzazepin-2-one			Antianginal	Angina, general

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ixabepilone	17-Oxa-4-azabicyclo(14.1.0)heptadecane-5,9-dione, 7,11-dihydroxy-8,8,10,12,16-pentamethyl-3-(1-methyl-2-(2-methyl-4-thiazolyl)ethenyl), (1R,3S,7S,10R,11S,12S,16R) [CAS]	219989-84-1		Anticancer, other	Cancer, breast
J-104132	5H-Cyclopenta[b]pyridine-6-carboxylic acid, 5-(1,3-benzodioxol-5-yl)-2-butyl-7-[2[(2S)-2-carboxypropyl]-4-methoxyphenyl]-6,7-dihydro-, (5S,6R,7R)- [CAS]	198279-45-7	WO 9737665	Antihypertensive, other	Heart failure
J-107088	5H-Indolo(2,3-a)pyrrolo(3,4-c)carbazole-5,7(6H)-dione, 12-β-D-glucopyranosyl-12,13-dihydro-2,10-dihydroxy-6-((2-hydroxy-1-(hydroxymethyl)ethyl)amino)- [CAS]	174402-32-5		Anticancer, other	Cancer, bladder
J-113397	1-[(3R,4R)-1-Cyclooctylmethyl-3-hydroxymethyl-4-piperidyl]-3-ethyl-1,3-dihydro-2H-benzimidazole-2-one			Analgesic, other	Pain, general
Janex-1	Phenol, 4-[(6,7-dimethoxy-4-quinazolinyl)amino]-[CAS]	202475-60-3		Anticancer, other	Cancer, leukaemia, general
josamycin	Leucomycin V, 3-acetate 4B-(3-methylbutanoate) [CAS]	16846-24-5	JP 41021759	Macrolide antibiotic	Infection, general
JTV-519	1,4-Benzothiazepine, 2,3,4,5-tetrahydro-7-methoxy-4-[1-oxo-3-[4-(phenylmethyl)-1-piperidinyl]propyl]- [CAS]	145903-06-6	WO 9212148	Cardiovascular	Infarction, myocardial
K-777			US 6287840	Protozoacide	Infection, trypanosomiasis, American
<b>Kainic Acid</b>		487-79-6			
Kalimate	Kalimate- [CAS]	92354-70-6		Urological	
<b>Kallidin</b>		342-10-9			
KB-130015	Acetic acid (2,6-diiodo-4-((2-methyl-3-benzofuranyl)methyl)phenoxy)- [CAS]	147030-48-6		Antiarrhythmic	Arrhythmia, general

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KCB-328	Methanesulfonamide, N-[3-amino-4-[2-[(3,4-dimethoxyphenyl)ethyl]methylamino]ethoxy]phenyl]-, monohydrochloride [CAS]	177596-55-3	WO 9604231	Antiarrhythmic	Arrhythmia, general
Kebuzone	2-(2-Chlorophenyl)-2-(methylamino)-cyclohexanone hydrochloride	853-34-9			
ketamine		6740-88-1		Formulation, transmucosal, nasal	Pain, post-operative
ketanserine	2,4-(1H,3H)-Quinazolin-3-one, 3-[2-{4-(4-fluorobenzoyl)-1-piperidinyl}ethyl]-[CAS]	74050-98-9 83846-83-7	EP 13612	Antihypertensive, other	Hypertension, general
ketazolam	4H-[1,3]Oxazino[3,2-d][1,4]benzodiazepine-4,7(6H)-dione, 11-chloro-8,12b-dihydro-2,8-dimethyl-12b-phenyl- [CAS]	27223-35-4	GB 1222294	Anxiolytic	
Kethoxal		27762-78-3			
Ketobemidone		469-79-4			
ketoconazole	Piperazine, 1-acetyl-4-[4-{2-(2,4-dichlorophenyl)-2-(1H-imidazol-1-ylmethyl)-1,3-dioxolan-4-yl}methoxy]phenyl]-, cis-[CAS]	65277-42-1	US 4335125	Antifungal	Infection, fungal, general
ketoprofen	mono(3-benzoyl)-Alpha-methylbenzeneacetate) [CAS]	173011-11-5	EP 502502	Formulation, transdermal, systemic	Pain, general
ketorolac	1H-Pyrrolizine-1-carboxylic acid, 5-benzoyl-2,3-dihydro-, (+/-)- [CAS]	74103-06-3 74103-07-4	EP 53021	Analgesic, NSAID	
Ketorolac Tromethamine					
ketotifen	10-H-Benzo[4,5]cyclohepta[1,2-b]thiophen-10-one, 4,9-dihydro-4-(1-methyl-4-piperidinylidene)-, (E)-2-butenedioate (1:1) [CAS]	34580-13-7 34580-14-8	GB 1355539	Antiasthma	Asthma
Khellin		82-02-0			
kinetin		9001-29-0		Dermatological	Photodamage

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
KNI-272	4-Thiazolidinecarboxamide, N-(1,1-dimethylethyl)-3-[2-hydroxy-3-[[[2-[[5-isoquinolinyloxy)acetyl]amino]-3-(methylthio)-1-oxopropyl]amino]-1-oxo-4-phenylbutyl]-, [4R-[3[2S*,3S*(R*)],4R*]]-[CAS]	147318-81-8	US 5644028	Antiviral, anti-HIV	Infection, HIV/AIDS
				Antifungal	Infection, general
			US 6110961	Antidepressant	Depression, general
			WO 9919305	Cognition enhancer	Unspecified
KRN-5500	L-glycero-β-L-manno-Heptopyranosylamine, 4-deoxy-4-[[[[(2E,4E)-1-oxo-2,4-tetradecadienyl]amino]acetyl]amino]-N-1H-purin-6-yl- [CAS]	151276-95-8	WO 9015811	Anticancer, antibiotic	Cancer, colorectal
		121602-88-8		Formulation, dermal, topical	Ulcer, decubitus
KT-136	Alpha-D-Glucopyranoside, β-D-fructofuranosyl, mixt. with 1-ethenyl-2-pyrrolidinone homopolymer compd. with iodine [CAS]				
KUL-7211	(-)-2-[(2S)-1,2,3,4-tetrahydro-2-[[[(2R)-2-hydroxy-2-(4-hydroxyphenyl)ethyl]amino]naphthalen-7-yloxy]-N,N-dimethylacetamide hydrochloride monohydrate			Urological	Urinary calculus
KW-2170	6H-Pyrazolo[4,5,1-de]acridin-6-one,5-[(3-aminopropyl)amino]-7,10-dihydroxy-2-[[[(2-hydroxyethyl)amino]methyl]-, dihydrochloride [CAS]	207862-44-0		Anticancer, alkylating	Cancer, lung, non-small cell
KW-6002	1H-Purine-2,6-dione, 8-(2-(3,4-dimethoxyphenyl)ethenyl)-1,3-diethyl-3,7-dihydro-7-methyl- (E)- [CAS]	155270-99-8		Antiparkinsonian	Parkinson's disease
KW-7158	3,3,3-Trifluoro-2-hydroxy-2-methyl-N-(10-oxo-4,10-dihydrothieno[3,2-C][1]benzothiepin-9-yl)propanamide 5,5 dioxide			Urological	Incontinence

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
L-365260	Urea, N-(2,3-dihydro-1-methyl-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl)-N'-(3-methylphenyl)-, (R)- [CAS]	118101-09-0	EP 284256	Anticancer, other	Cancer, general
L-5-hydroxytryptophan	L-Tryptophan, 5-hydroxy- [CAS]	4350-09-8		Metabolic and enzyme disorders	Unspecified
L-745337	Methanesulfonamide, N-[β-[(2,4-difluorophenyl)thio]-2,3-dihydro-1-oxo-1H-inden-5-yl]- [CAS]	158205-05-1	WO 9413635	Analgesic, NSAID	Pain, general
L-758298	Phosphonic acid, [3-[[[(2R,3S)-2-[(1R)-1-[3,5-bis(trifluoromethyl)phenyl]ethoxy]-3-(4-fluorophenyl)-4-morpholinyl]methyl]-2,5-dihydro-5-oxo-1H-1,2,4-triazol-1-yl]- [CAS]	172673-20-0	WO 9523798	Antiemetic	Chemotherapy-induced nausea and vomiting
L-826141	5-[1-hydroxy-2-[(1-methyl-3-phenylpropyl)amino]ethyl]salicylamide HCl		WO 9722585	Antiasthma	Unspecified
labetalol	3,5-Pyridinedicarboxylic acid, 4-[2-[3-(1,1-dimethylethoxy)-3-oxo-1-propenyl]phenyl]-1,4-dihydro-2,6-dimethyl-, diethyl ester, (E) [CAS]	32780-64-6 36894-69-6	US 4012444	Antihypertensive, adrenergic	
lacidipine	D-Glucitol, 4-O-β-D-galactopyranosyl- [CAS]	103890-78-4	GB 2164336	Antihypertensive, other	Hypertension, general
Lactic Acid					
lactitol		585-86-4		Hepatoprotective	Infection, neurological
Lactulose	Acetamide, 2-[(2-furanyl)methyl]sulfinyl]-N-[4-[[4-(1-piperidinylmethyl)-2-pyridinyl]oxy]-2-butenyl]-, (Z)- [CAS]	4618-18-2			
lafutidine	2(1H)-Pyrimidinone, 4-amino-1-[2-(hydroxymethyl)-1,3-oxathiolan-5-yl]-, (2R-cis)- [CAS]	118288-08-7 169899-19-8	EP 282077	Antilulcer	Ulcer, gastric
Lamifiban	1,2,4-Triazine-3,5-diamine, 6-(2,3-dichlorophenyl)- [CAS]	144412-49-7			
lamivudine		134678-17-4	EP 513917	Antiviral, anti-HIV	Infection, HIV/AIDS
lamotrigine		84057-84-1	EP 21121	Antiepileptic	Epilepsy, partial (focal, local)

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
lanidolol	Benzenepropanoic acid, 4-[2-hydroxy-3-[[2-[[4-morpholinyl(carbonyl)amino]ethyl]amino]propoxy]-, (2,2-dimethyl-1,3-dioxolan-4-yl)methyl ester, [S-(R*, R*)]- HCL	133242-30-5	EP 397031	Antiarrhythmic	Tachycardia, general
		153322-05-5		Neurological	Unspecified
lanicemine	(S)-Alpha-phenyl-2-pyridine ethanamine dihydrochloride				
laniquidar	Methyl 6,11-dihydro-11-[1-[2-[4-(2-quinolylmethoxy)phenyl]ethyl]-4-piperidinylidene]-5H-imidazo[2,1-b][3]benzazepine-3-carboxylate	197509-46-9	WO 9734897	Radio/chemosensitizer	Cancer, general
lanoconazole	1H-Imidazole-1-acetonitrile, Alpha-[4-(2-chlorophenyl)-1,3-dithiolan-2-ylidene], (E)- (±)- [CAS]	101530-10-3	US 4738976	Antifungal	Infection, fungal, general
Lanotepilase		171870-23-8			
Lanreotide		108736-35-2			
lansoprazole	1H-Benzimidazole, 2-[[[3-methyl-4-(2,2,2-trifluoroethoxy)-2-pyridyl]methyl]sulfinyl]- [CAS]	103577-45-3	EP 174726	Antiulcer	Ulcer, duodenal
lanthanum carbonate	Carbonic acid, lanthanum(3+) salt (3:2)[CAS]	587-26-8	US 5968976	Urological	Hyperphosphataemia
lapatinib	4-Quinazolinamine, N-[3-chloro-4-[(3-fluorobenzyl)methoxy phenyl]-6-[5-[[[2-[methylsulfonyl]ethyl]amino]methyl]furan-2-yl]]				
		388082-78-8		Anticancer, other	Cancer, breast
		248281-84-7		Multiple sclerosis treatment	Multiple sclerosis, general
lasofoxifene	2-Naphthalenol, 5,6,7,8-tetrahydro-6-phenyl-5-(4-(2-(1-pyrrolidinyl)ethoxy)phenyl)-(5R-cis)-, (S-(R*, R*)))-2,3-dihydroxybutanedioate [CAS]	190791-29-8	WO 9716434	Menopausal disorders	Hormone replacement therapy

Table IV

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Clamoxef	5-Oxa-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[carboxy(4-hydroxyphenyl)acetyl]amino]-7-methoxy-3-[[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo- [CAS]	64952-97-2	GB 1547351	Beta-lactam antibiotic	Infection, general
		64953-12-4			
latanoprost	5-Heptenoic acid, 7-(3,5-dihydroxy-2-(3-hydroxy-5-phenylpentyl)cyclopentyl)-, 1-methylethyl ester, (1R-(1 $\alpha$ )(Z),2 $\beta$ (R*),3 $\alpha$ ),5 $\alpha$ )- [CAS]	130209-82-4	WO 9002553	Prostaglandin	Glaucoma
		135-43-3			
		146-37-2			
		83-72-7			
LAX-111	1-(Z,Z,Z,Z-eicosa-5,8,11,14,17-pentaenoyloxy)-3-(Z,Z,Z,Z-eicosa-5,8,11,14,17-pentaenoyloxy)-propane			Neuroleptic	Schizophrenia
Lazabemide	Benzenecarboximide acid, 4-[(2S)-3-(cyclopentylmethylamino)-2-[(2-naphthalenylsulfonyl)amino]-3-oxopropyl]-hydrazide [CAS]	103878-84-8	WO 9749673	Antithrombotic	Thrombosis, venous
LB-30057					
L-Cystine					
Lefetamine	4-Isoxazolecarboxamide, 5-methyl-N-[4-(trifluoromethyl)phenyl]- [CAS]	7262-75-1	EP 13376	Antiarthritic, immunological	Arthritis, rheumatoid
		75706-12-6			
		104981-93-3			
		75706-12-6			
		5633-16-9			
Leiofpyrrole	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[[[aminophenylacetyl)amino]-3,3-dimethyl-7-oxo-, (5-methyl-2-oxo-1,3-dioxol-4-yl)methyl ester, [2S-[2 $\alpha$ ,5 $\alpha$ ,6 $\beta$ (S*)]]- [CAS]	80734-02-7	US 5610173	Anticancer, other	Cancer, ovarian
		86273-18-9			
		37339-90-5			
lenampicillin					
lentinan	Lentinan [CAS]			Penicillin, oral Anticancer, immunological	Infection, general Cancer, stomach

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<i>Lepirudin</i>	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, 2-[(3,3-diphenylpropyl)methylamino]-1,1-dimethylethyl methyl ester-, hydrochloride [CAS]	100427-26-7 132866-11-6	US 4705797	Antihypertensive, other	Hypertension, general
tercanidipine	1H-Benzimidazole, 1-(phenylmethyl)-2-(1-piperazinyl)- [CAS]	143257-98-1 132449-46-8	US 5256665	Antiemetic	Nausea and vomiting, general
<b>Lesopitron</b>	Benzoic acid, 4-((3-(1,6-dihydro-6-oxo-9H-purin-9-yl)-1-oxopropyl)amino)-, monopotassium salt [CAS]	138117-50-7	US 6338963	Antiparkinsonian	Parkinson's disease
leteprinin	4-Thiazolidinecarboxylic acid, 2-[2-((2-ethoxy-2-oxoethyl)thio)ethyl]- [CAS]	53943-88-7	US 4032534	COPD treatment	Bronchitis, chronic
letosteine	Benzonitrile, 4,4'-(1H-1,2,4-triazol-1-ylmethylene)bis- [CAS]	112809-51-5 480-17-1 53714-56-0	EP 236940	Anticancer, hormonal	Cancer, breast
letrozole					
<b>Leucocyanidin</b>					
<b>Leuprolide</b>					
	Luteinizing hormone-releasing factor (pig), 6-D-leucine-9-(N-ethyl-L-prolinamide)-10-deglycinamide-, monoacetate (salt) [CAS]	53714-56-0 74381-53-6		Formulation, implant	Cancer, prostate
leuprolide acetate					
	Luteinizing hormone-releasing factor (pig), 6-D-leucine-9-(N-ethyl-L-prolinamide)-10-deglycinamide- [CAS]	53714-56-0		Formulation, implant	Cancer, prostate
leuprorelin					
<b>Levallorphan</b>		152-02-3			
levamisole	Imidazo[2,1-b]thiazole, 2,3,5,6-tetrahydro-6-phenyl-, (S)- [CAS]	14769-73-4 16595-80-5	US 4584305	Anthelmintic	Infection, helminth, general
<b>Levcromakalim</b>		94535-50-9			
levetiracetam	1-Pyrrolidineacetamide, Alpha-ethyl-2-oxo-, (S)- [CAS]	102767-28-2	EP 162036	Antiepileptic	Epilepsy, general
levobetaxolol	2-Propanol, 1-(4-(2-(cyclopropylmethoxy)ethyl)phenoxy)-3-((1-methylethyl)amino) hydrochloride [CAS]	116209-55-3		Formulation, mucosal, topical	Glaucoma

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levobunolol	1-(2H)-Naphthalene, 5-[3-[(1,1-dimethylethyl)amino]-2-hydroxypropoxy]-3,4-dihydro-, (S)- [CAS]	27912-14-7 47141-42-4	US 3641152	Formulation, mucosal, topical	Glaucoma
levobupivacaine	2-Piperidinecarboxamide, 1-butyl-N-(2,6-dimethylphenyl)-, (S)- [CAS]	27262-47-1	WO 9510276	Anaesthetic, injectable	Anaesthesia
levocabastine	4-Piperidinecarboxylic acid, 1-[4-cyano-4-(4-fluorophenyl)cyclohexyl]-3-methyl-4-phenyl-, [3S-[1(cis),3Alpha,4R]]- [CAS]	79449-98-2 79516-68-0 79547-78-7	US 4369184	Antiallergic, non-asthma	Rhinitis, allergic, general
levocetirizine	Acetic acid, 2-(4-[(4-chlorophenyl)phenylmethyl])-1-piperazinyl)ethoxy)-, (R)- [CAS]	130018-77-8 59-92-7	WO 9406429	Antiallergic, non-asthma	Allergy, general
<b>Levodopa</b>	1,2-Propanediol, 3-(4-phenyl-1-piperazinyl)-, (S)- [CAS]	99291-25-5	EP 147847	Antitussive	Cough
levodropropizine	7H-Pyrido[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid, 9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-, (S)- [CAS]	100986-85-4 138199-71-0	EP 206283	Quinolone antibacterial	Infection, respiratory tract, lower
levofloxacin		1477-40-3 27058-84-0 5741-22-0 77164-20-6	EP 15418	Antihypertensive, adrenergic	
<b>Levomethadyl Acetate</b>	2-Propanol, 1-(2-methoxyphenoxy)-3-[(1-methylethyl)amino]-, (S)- [CAS]	797-63-7		Formulation, implant	Contraceptive, female
levonorgestrel	18,19-Dinorpregn-4-en-20-yn-3-one, 13-ethyl-17-hydroxy-, (17Alpha)- [CAS]	24558-01-8 2338-37-6 77-07-6			
<b>Levophacetoperane</b>					
<b>Levopropoxyphene</b>					
<b>Levorphanol</b>					
levosimendan	Propanedinitrile, [[4-(1,4,5,6-tetrahydro-4-methyl-6-oxo-3-pyridazinyl)phenyl]hydrazono]-, (R)- [CAS]	131741-08-7 141505-33-1	EP 383449	Cardio stimulant	Heart failure
levosulpiride	Benzamide, 5-(aminosulfonyl)-N-[(1-ethyl-2-pyrrolidinyl)methyl]-2-methoxy-, (S)- [CAS]	23672-07-3	GB 2014990	Antiemetic	Dyspepsia



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<i>Levodhydroxine</i>	1-β-L-ribofuranosyl-1,2,4-triazole-3-carboxamide				
levovirin	L-Leucine, N-methyl-N-[[4-[(2-methyl-1H-imidazo[4,5-c]pyridin-1-yl)methyl]phenyl]sulfonyl]-, ethyl ester- [CAS]			Antiviral, other	Infection, hepatitis-C virus
lexipafant		139133-26-9	WO 9203423	Neurological	Dementia, AIDS-related
LF-15-0195			WO 9624579	Immunosuppressant	Lupus erythematosus, general
LF-16-0687	2-Pyrrolidinecarboxamide, N-[3-[[4-(aminoiminomethyl)benzoylamino]propyl]-1-[[2,4-dichloro-3-[[[(2,4-dimethyl-8-quinolinyl)oxy]methyl]phenyl]sulfonyl]-, (2S)- [CAS]	209733-45-9	FR 2756562	Neuroprotective	Head trauma
LGD-1550	2,4,6-Octatrienoic acid, 7-(3,5-bis(1,1-dimethylethyl)phenyl)-3-methyl-(2E,4E,6E)- [CAS]	178600-20-9		Anticancer, other	Cancer, cervical
LH		9002-67-9			
LH-RH		9034-40-6			
liarazole	1H-Benzimidazole, 5-[(3-chlorophenyl)-1H-imidazol-1-ylmethyl]- [CAS]	115575-11-6		Formulation, other	Psoriasis
licofelone	1H-Pyrrolizine-5-acetic acid, 6-(4-chlorophenyl)-2,3-dihydro-2,2-dimethyl-7-phenyl- [CAS]	156897-06-2		Antiarthritic, other	Arthritis, osteo
Licostinel		153504-81-5			
lidadronate	Phosphonic acid, [1-amino-3-(dimethylamino)propylidene]bis- [CAS]	63132-38-7	WO 9702827	Urological	Unspecified
Lidamidine		66871-56-5			
lidocaine	Acetamide, 2-(diethylamino)-N-(2,6-dimethylphenyl)- [CAS]	137-58-6			
Lidofenin		59160-29-1			
Lidoflazine		3416-26-0		Formulation, transdermal, patch	Pain, post-herpetic
limaprost	Prosta-2,13-dien-1-oic acid, 11,15-dihydroxy-17,20-dimethyl-9-oxo-, (2E,11Alpha,13E,15S,17S)-, [CAS]	74397-12-9	GB 2041368	Prostaglandin	Buerger's syndrome

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Lincomycin		154-21-2			
Lindane		58-89-9			
linezolid	Acetamide, N-((3-(3-fluoro-4-(4-morpholinyl)phenyl)-2-oxo-5-oxazolidinyl)methyl)-, (S)- [CAS]	165800-03-3	WO 9507271	Antibiotic, other	Infection, dermatological
Linoleic Acid		60-33-3			
Linolenic Acid		463-40-1			
Liothyronine		6893023			
Lipase		9001-62-1			
Lipo-dexamethasone palmitate	Pregna-1,4-diene-3,20-dione, 9-fluoro-11,17-dihydroxy-16-methyl-21-[(1-oxohexadecyl)oxy]-, (11 $\beta$ ,16 $\alpha$ )- [CAS]	14899-36-6		Formulation, optimized, microemulsion	Arthritis, rheumatoid
lipo-flurbiprofen	[1,1'-Biphenyl]-4-acetic acid, 2-fluoro-Alpha-methyl-, 1-(acetyloxy)ethyl ester [CAS]	91503-79-6	JP 60208910	Formulation, optimized, microemulsion	Pain, cancer
Lipogel HA			EP 525655	Formulation, optimized, liposomes	Unspecified
LiquiVent	perfluorooctylbromide	423-55-2	US 5437272	Lung Surfactant	Respiratory distress syndrome, adult
liranaftate	Carbamothioic acid, (6-methoxy-2-pyridinyl)methyl-, O-(5,6,7,8-tetrahydro-2-naphthalenyl) ester [CAS]	88678-31-3	GB 2124617	Antifungal	Infection, dermatological
lisinopril	L-Proline, 1-[N2-(1-carboxy-3-phenylpropyl)-L-lysyl]-, (S)- [CAS]	76547-98-3			
		83915-83-7	EP 12401	Antihypertensive, renin system	Hypertension, general
Lisofylline		100324-81-0			
		19875-60-6			
lisuride	Urea, N'-((8 $\alpha$ )-9,10-didehydro-6-methylergolin-8-yl)-N,N-diethyl-, [CAS]	305-13-5			
		18016-80-3			
Lithium Citrate		919-16-4		Antiprolactin	Acromegaly
lithium	Carbonic acid, dilithium salt [CAS]	554-13-2			
	Benzamide, N-[3-chloro-4-(5H-pyrrolo[2,1-c][1,4]benzodiazepin-10(1H)-ylcarbonyl)phenyl]-5-fluoro-2-methyl- [CAS]			Formulation, modified-release, <=24hr	Depression, bipolar
lixivaptan		168079-32-1	US 5736540	Cardiovascular	Heart failure
LJP-1082			US 6207160	Immunosuppressant	Thrombosis, venous

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LLUAlpha	S-2,7,8-Trimethyl-6-(β-carboxyethyl)-6-hydroxychroman			Antihypertensive, other	Hypertension, general
LMP-160			US 5643893	Antiasthma	Asthma
LMP-420			US 5643893	Antiarthritic, other	Arthritis, rheumatoid
lobaplatin	Platinum, (1,2-cyclobutanedimethanamine-N,N')[2-hydroxypropanoato(2-)-O1,O2]-, [SP-4-3-(S),(trans)]- [CAS]	135558-11-1	DE 4115559	Anticancer, alkylating	Cancer, lung, small cell
Lobeline	2,2'-(2-chloro-5-cyano-1,3-phenylene)dilimino bis(2-oxoacetate):2-amino-2-(hydroxymethyl)-1,3-propanediol (1:2)	90-69-7			
Lobenzarit		63329-53-3			
		63610-09-3	US 4439445	Antiasthma	Asthma
lodoxamide	Ethanone, 1-(4-chlorophenyl)-2-[[3-(10,11-dihydro-5H-dibenz[b,f]azepin-5-yl)propyl]methylamino]- [CAS]	53882-12-5			
Lofentanil		61380-40-3			
		23047-25-8	GB 1177525	Antidepressant	
lofepramine	1H-Imidazole, 2-[1-(2,6-dichlorophenoxy)ethyl]-4,5-dihydro- [CAS]	26786-32-3			
lofexidine		31036-80-3	GB 1181356	Antihypertensive, adrenergic	Hypertension, general
Loflucarban		790-69-2			
lomefloxacin	3-Quinolonecarboxylic acid, 1-ethyl-6,8-difluoro-1,4-dihydro-7-(3-methyl-1-piperazinyl)-4-oxo- [CAS]	98079-51-7			
		98079-52-8	EP 140116	Quinolone antibacterial	Infection, respiratory tract, lower
lomerizine	Piperazine, 1-[bis(4-fluorophenyl)methyl]-4-[[2,3,4-trimethoxyphenyl)methyl]-, [CAS]	101477-54-7	EP 159566	Antimigraine	Migraine
lomitilpine		101477-55-8		Neurological	
		10226-54-7	DE 2207860		
lomustine	Urea, N-(2-chloroethyl)-N'-cyclohexyl-N-nitroso- [CAS]	13010-47-4	JP 48075526	Anticancer, alkylating	
lonafarnib	1-Piperidinecarboxamide, 4-[2-[4-[(11R)-3,10-dibromo-8-chloro-6,11-dihydro-5H-benzof[5,6]cyclohepta[1,2-b]pyridin-11-yl]-1-piperidinyl]-2-oxoethyl]- [CAS]				
		193275-84-2	US 5874442	Anticancer, other	Cancer, lung, non-small cell

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Lonapalene	1H-Indazole-3-carboxylic acid, 1-[(2,4-dichlorophenyl)methyl]- [CAS]	91431-42-4	DE 2310031	Radio/chemosensitizer	Cancer, breast
Lonazolac		53808-88-1			
lonidamine		50264-69-2			
loperamide	4-(p-chlorophenyl)-4-hydroxy-N,N-dimethyl-Alpha,Alpha-diphenyl-1-piperidine butyramide HCl	34552-83-5 53179-11-6	US 3714159	Antidiarrhoeal	Diarrhoea, general
loperamide oxide	1-Piperidinebutanamide, 4-(4-chlorophenyl)-4-hydroxy-N,N-dimethyl-Alpha,Alpha-diphenyl-, 1-oxide, trans- [CAS]	106900-12-3	EP 219898	Antidiarrhoeal	Diarrhoea, general
loprazolam	1H-Imidazo[1,2-a][1,4]benzodiazepin-1-one, 6-(2-chlorophenyl)-2,4-dihydro-2-[(4-methyl-1-piperazinyl)methylene]-8-nitro- [CAS]	61197-73-7 61197-93-1 70111-54-5	GB 1496426	Hypnotic/Sedative	Infection, respiratory tract, lower
Loprinone	1-Azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(aminophenylacetyl)amino]-3-chloro-8-oxo-, [6R-[6Alpha,7β(R*)]]- [CAS]	106730-54-5	EP 14475	Cephalosporin, oral	
loracarbaf		76470-66-1 121961-22-6			
Lorajmine		47562-08-3			
loratadine	1-Piperidinecarboxylic acid, 4-(8-chloro-5,6-dihydro-11H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-ylidene)-, ethyl ester- [CAS]	79794-75-5	EP 42544	Antiallergic, non-asthma	Rhinitis, allergic, general
lorazepam	2H-1,4-Benzodiazepin-2-one, 7-chloro-5-(2-chlorophenyl)-1,3-dihydro-3-hydroxy-	846-49-1	DE 2642856	Formulation, oral, orally-disintegrating	Epilepsy, general
lorcainide	Benzeneacetamide, N-(4-chlorophenyl)-N-[1-(1-methylethyl)-4-piperidinyl]-[CAS]	58934-46-6 59729-31-6		Antiarrhythmic	
lormetazepam	2H-1,4-Benzodiazepin-2-one, 7-chloro-5-(2-chlorophenyl)-1,3-dihydro-3-hydroxy-1-methyl- [CAS]	848-75-9		US 3296249	Hypnotic/Sedative

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lornoxiam	2H-Thieno[2,3-e]-1,2-thiazine-3-carboxamide, 6-chloro-4-hydroxy-2-methyl-N-2-pyridinyl-, 1,1-dioxide- [CAS]	70374-39-9	EP 313935	Analgasic, NSAID	Pain, post-operative
losartan	1H-imidazole-5-methanol, 2-butyl-4-chloro-1-[[2'-(1H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl]methyl]-, [CAS]	124750-99-8 114798-26-4	EP 253310	Antihypertensive, renin system	Hypertension, general
loteprednol	Androsta-1,4-diene-17-carboxylic acid, 17-[(ethoxycarbonyl)oxy]-11-hydroxy-3-oxo-, chloromethyl ester, (11 $\beta$ , 17 $\alpha$ )- [CAS]	82034-46-6	GB 2079755	Anti-inflammatory, topical	Uveitis
Lotrafiban		171049-14-2			
Lovastatin		75330-75-5			
Loxapine		10/2/1977			
loxiglumide	Pentanoic acid, 4-[(3,4-dichlorobenzoyl)amino]-5-[(3-methoxypropyl)pentylamino]-5-oxo-, ( $\pm$ )- [CAS]	107097-80-3	WO 8703869	GI inflammatory/bowel disorders	Pancreatitis
loxoprofen	Benzeneacetic acid, Alpha-methyl-4-[(2-oxocyclopentyl)methyl]- [CAS]	68767-14-6 80382-23-6 87828-36-2	EP 55588	Antiarthritic, other	Arthritis, rheumatoid
Lu-35-138	1-[3[[2-[5-chloro-1-(4-fluorophenyl)-3-1H-indolyl]ethyl]methylamino]propyl]-2-imidazolidinone hydrochloride		WO 9516684	Neuroleptic	Psychosis, general
Lubeluzole	(-)-7-[(2R,4aR,5R,7aR)-2-(1,1-difluoropentyl)-2-hydroxy-6-oxooctahydrocyclopenta[b]pyran-5-yl]heptanoic acid	144665-07-6			
lubiprostone		136790-76-6		Laxative	Constipation
lucanthone	Thioxanthen-9-one, 1-((2-(diethylamino)ethyl)amino-4-methyl)- [CAS]	479-50-5		Radio/chemosensitizer	Cancer, brain
Lucanthone		548-57-2			
Lumefantrine		82186-77-4			
lumiracoxib	Benzeneacetic acid, 2-((2-chloro-6-fluorophenyl)amino)-5-methyl- [CAS]	220991-20-8		Analgesic, NSAID	Pain, general

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Lurtotecan	11H-1,4-Dioxino[2,3-g]pyran[3',4':6,7]indolizino[1,2-b]quinoline-9,12[8H,14H]-dione, 8-ethyl-2,3-dihydro-8-hydroxy-15-[[4-methyl-1-piperazinyl]methyl]-, [CAS]	155773-58-3		Formulation, optimized, liposomes	Cancer, ovarian
	Lutetium, bis(acetato-O)[9,10-diethyl-20,21-bis-[2-[2-(2-methoxyethoxy)ethoxy]ethoxy]-4,15-dimethyl-8,11-imino-3,6:16,13-dinitrido-1,18-benzodiazacycloicosine-5,14-dipropanolato-N1,N18,N23,N24,N25]-, (PB)-7-11-233'2'4)- [CAS]	156436-90-7	WO 9906411	Radio/chemosensitizer	Atherosclerosis
	Zinc[2-(2,6-dichloroanilino)phenyl]acetate			Anti-inflammatory	Arthritis, rheumatoid
LV-216	Hexadecanamide, N-[4-[[2-[2-[2-[O-(N-acetyl-Alpha-neuraminosyl)-(2-3)-O-beta-D-galactopyranosyl-(1-4)-O-(6-deoxy-Alpha-L-galactopyranosyl-(1-3))-beta-D-glucopyranosyl]oxy]ethoxy]ethoxy]ethoxy]methyl]phenyl]-2-tetradecyl- [CAS]	158792-45-1		Cognition enhancer	Dementia, senile, general
LX-104	beta-methyl-6-chloromelatonin		EP 655243	Hypnotic/Sedative	Sleep disorder, general
LY-156735	Benzoic acid, 2-[3-[3-[(5-ethyl-4'-fluoro-2-hydroxy[1,1'-biphenyl]-4-yl)oxy]propoxy]-2-propylphenoxy]- [CAS]	161172-51-6		Anticancer, other	Cancer, melanoma
LY-293111	3-Isoquinolinecarboxylic acid, decahydro-6-[2-(1H-tetrazol-5-yl)ethyl]-, [3S-(3Alpha,4aAlpha,6beta,8aAlpha.)]- [CAS]	154652-83-2		Analgesic, other	Pain, neuropathic
LY-293558	1,4-Dioxo-8,11-diazacyclohexadec-13-ene-2,5,9,12-tetrone, 10-[(3-chloro-4-methoxyphenyl)methyl]-6,6-dimethyl-3-(2-methylpropyl)-16-[(1S)-1-[(2S,3R)-3-phenyloxiranyl]ethyl]-, (3S,10R,13E,16S)- [CAS]				
LY-355703		18256-67-7	WO 9707798	Anticancer, other	Cancer, lung, non-small cell
Lyapolate		25053-27-4			
Lymecycline		992-21-2			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Lynestrenol</b>	L-Lysine, 2-hydroxybenzoate [CAS]	52-76-6	WO 9624331 WO 9843093	Analgesic, NSAID Diagnostic	Diagnosis, cancer
<b>Lypressin</b>		50-57-7			
<b>Lysine Acetylsalicylate</b>		62952-06-1			
<b>lysine salicylate</b>		59535-08-9			
<b>lysophospholipids</b>					
<b>M-40403</b>	Dichloro[(4aR,13aR,17aR,21aR)-1,2,3,4,4a,5,6,12,13,13a,14,15,16,17,17a,18,19,20,21,21a-eicosahydro-1,7-nitrilo-7H-dibenzo[b,h][1,4,7,10]tetraazacycloheptadecine-kappaN5,kappaN13,kappaN18,kappaN21,kappaN22]manganese		US 6180620	Anticancer, other	Unspecified
<b>mabuprofen</b>	Benzeneacetamide, N-(2-hydroxyethyl)-Alpha-methyl-4-(2-methylpropyl)-, (+/-)-[CAS]	82821-47-4	DE 3121595	Anti-inflammatory	
<b>Mabuterol</b>	Benzenesulfonamide, 4-(aminomethyl)-monoacetate [CAS]	56341-08-3		Vulnery	Burns
<b>Macrophage Colony-Stimulating Factor</b>		81627-83-0			
<b>MADU</b>		840-50-6			
<b>mafenide</b>	Ethanesulfonic acid, 2-[[2-[bis(2-chloroethyl)amino]tetrahydro-2H-1,3,2-oxazaphosphorin-4-yl]thio]-, P-oxide, cis-(±)- [CAS]	13009-99-9 138-39-6	EP 393575	Anticancer, alkylating	Cancer, renal
<b>mafosfamide</b>		88859-04-5 98845-64-8			
<b>magaldrate</b>	Aluminum magnesium hydroxide sulfate (Al5Mg10(OH)31(SO4)2), hydrate [CAS]	74978-16-8	US 2923660	Antacid/Antiflatulent	
<b>Magenta I</b>	Magnesium chloride (MgCl2) [CAS]	632-99-5		Formulation, oral, enteric-coated	Nutrition
<b>Magnesium Acetylsalicylate</b>		132-49-0			
<b>Magnesium Carbonate</b>		39409-82-0			
<b>Hydroxide magnesium chloride</b>		7786-30-3			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Magnesium Citrate	D-Gluconic acid, magnesium salt (2:1) [CAS]	3344-18-1		Formulation, other	Hypertension, general
magnesium gluconate		3632-91-5			
Magnesium Lactate		18917-93-6			
Magnesium Salicylate		18917-89-0			
Malathion		121-75-5			
Malotilate		59937-28-9			
Mandelic Acid		90-64-2			
Mandelic Acid Isoamyl Ester		5421045			
Mangafodipir	118248-94-5 (free acid); 155319-91-8 (hexahydrogen )				
manidipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, 2-[4-(diphenylmethyl)-1-piperazinyl]ethyl methyl ester [CAS]	89226-50-6 89226-75-5	EP 94159	Antihypertensive, other	Hypertension, general
Mannomustine		551-74-6			
mannose-6-phosphate					
Maprotiline	mannose-6-phosphate	10262-69-8		Vulnerary	Wound healing
maribavir	1H-Benzimidazol-2-amine, 5,6-dichloro-N-(1-methylethyl)-1-β-L-ribofuranosyl- [CAS]	176161-24-3		Antiviral, other	Infection, cytomegalovirus
marimastat	N-[2,2-Dimethyl-1(S)-(N-methylcarbamoyl)propyl]-N,3(S)-dihydroxy-2(R)-isobutylsuccinamide	154039-60-8	WO 9402447	Anticancer, other	Cancer, pancreatic
maxacalcitol	1,3-Cyclohexanediol, 4-methylene-5-(2-(octahydro-1-(1-(3-hydroxy-3-methylbutoxy)ethyl)-7a-methyl-4H-inden-4-ylidene)ethylidene)-, (1S-(1Alpha(R*),3aβ,4E(1S*,3R*,5Z),7aAlpha))- [CAS]	103909-75-7	US 4891364	Hormone	Hyperparathyroidism

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mazindol	3H-Imidazo[2,1-a]isoindol-5-ol, 5-(4-chlorophenyl)-2,5-dihydro- [CAS]	22232-71-9	US 3763178	Anorectic/Antiobesity	Obesity
<b>Mazipredone</b>		13085-08-0	US 6043259	Cardiovascular	Unspecified
MCC-478	(2-amino-6-(4-methoxyphenylthio)-9-[2-(phosphonomethoxy)ethyl]purine bis(2,2,2-trifluoroethyl) ester)			Antiviral, other	Infection, hepatitis-B virus
MCI-154	3(2H)-Pyridazinone, 4,5-dihydro-6-[4-(4-pyridinylamino)phenyl]-, monohydrochloride [CAS]	98326-32-0 98326-33-1	EP 145019	Cardio stimulant	Heart failure
<b>m-Cresyl Acetate</b>		122-46-3			
MDAM	Gamma-Methylene-10-deazaaminopterin			Anticancer, antimetabolite	Cancer, general
MDI-101			US 4885311	Antiacne	Acne
MDI-403		403849-94-5	US 4677120	Antiacne	Acne
MDL-100907	4-Piperidinemethanol, Alpha-(2,3-dimethoxyphenyl)-1-(2-(4-fluorophenyl)ethyl)-, (R)- [CAS]	139290-65-6		Hypnotic/Sedative	Sleep disorder, general
mebendazole	methyl-5-benzoylbenzimidazole-2-carbamate	31431-39-7	GB 1307306	Anthelmintic	
mebeverine	Benzoic acid, 3,4-dimethoxy-, 4-[ethyl[2-(4-methoxyphenyl)-1-methylethyl]amino]butyl ester [CAS]	3625-06-7		Antispasmodic	Irritable bowel syndrome
<b>Mebhydroline</b>		524-81-2			
<b>Mebrofenin</b>		78266-06-5			
<b>Mebutamate</b>		64-55-1			
mecamylamine	Bicyclo(2.2.1)heptan-2-amine, N,2,3,3-tetramethyl- [CAS]	60-40-2		Neurological	Unspecified
<b>Mechlorethamine</b>		51-75-2			
<b>Mechlorethamine Oxide</b>		302-70-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
medillinam	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[[[(hexahydro-1H-azepin-1-yl)methylene]amino]-3,3-dimethyl-7-oxo-1,2S-(2Alpha,5Alpha,6,beta.)]- [CAS]	32887-01-7 32887-03-9	GB 1293590	Penicillin, injectable	Infection, general
Mecizine		569-65-3			
Meclocycline		2013-58-3			
meclofenamate	Benzoic acid, 2-[(2,6-dichloro-3-methylphenyl)amino]-, monosodium salt [CAS]	6385-02-0 644-62-2		Antiarthritic, other	Arthritis, osteo
Meclofenamic Acid		644-62-2			
Meclofenoxate		51-68-3			
Mecloqualone		340-57-8			
Mecysteine		18598-63-5			
Medazepam		12/6/2898			
medifoxamine	Ethanamine, N,N-dimethyl-2,2-diphenoxy- [CAS]	32359-34-5	FR M5498	Antidepressant	
Medrogestone		977-79-7			
Medronic Acid		1984-15-2			
medroxyprogesterone	Pregn-4-ene-3,20-dione, 17-(acetyloxy)-6-methyl-, (6Alpha)	71-58-9 520-85-4		Formulation, fixed-dose combinations	Contraceptive, female
Medrysone		2668-66-8			
Mefenamic Acid		61-68-7			
Mefenorex		17243-57-1			
Mefexamide		1227-61-8			
mefloquine	4-Quinolinemethanol, Alpha-2-piperidinyl-2,8-bis(trifluoromethyl)-, (R*,S*)-(±)-[CAS]	51773-92-3 53230-10-7 69191-18-0	GB 1594282	Antimalarial	
Mefruside		7195-27-9			
Megestrol		595-33-5			
Meglumine		22154-43-4 131-49-7			
meglutol	2-hydroxy-2-methyl-1,3-propandicarboxylic acid	503-49-1	US 3629449	Hypolipaemic/Antiatherosclerosis	Hyperlipidaemia, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
melagatran	Glycine, N-[(1R)-2-[(2S)-2-[[[4-(aminoiminomethyl)phenyl]methyl]amino]carbonyl]-1-azetidinyl]-1-cyclohexyl-2-oxoethyl]- [CAS]	159776-70-2	WO 9616671	Antithrombotic	Thrombosis, general
melanocortin-4 agonist	N-[(3R)-1,2,3,4-Tetrahydroisoquinolinium-3-ylcarbonyl]-(1R)-1-(4-chlorobenzyl)-2-[4-cyclohexyl-4-(1H-1,2,4-triazol-1-yl)methyl]piperidin-1-yl]-2-oxoethylamine(1)			Anorectic/Antiobesity	Obesity
Melarsoprol		494-79-1			
Melengestrol		5633-18-1			
melevodopa	Alanine, 3-(3,4-dihydroxyphenyl)-methyl ester [CAS]	7101-51-1	EP 252290	Antiparkinsonian	Parkinson's disease
Melinamide		14417-88-0			
Melitracen		5118-29-6			
meloxicam	2H-1,2-Benzothiazine-3-carboxamide, 4-hydroxy-2-methyl-N-(5-methyl-2-thiazolyl)-, 1,1-dioxide- [CAS]	71125-38-7	US 4233299	Antiarthritic, other	Arthritis, rheumatoid
melperone	1-Butanone, 1-(4-fluorophenyl)-4-(4-methyl-1-piperidinyl)- [CAS]	1622-79-3			
Melphalan		3575-80-2	BE 651144	Neuroleptic	
		148-82-3			
meluadrine	Benzenemethanol, 2-chloro-Alpha-(((1,1-dimethylethyl)amino)methyl)-4-hydroxy-, (R)-, (R*,R*)-2,3-dihydroxybutanedioate (1:1) (salt) [CAS]	134865-37-5	EP 420120	Labour inhibitor	Labour, preterm
memantine	Tricyclo[3.3.1.1 <sup>3,7</sup> ]decan-1-amine, 3,5-dimethyl [CAS]	41100-52-1			
	Acetamide, 2-[[[(5R,6S)-6-[(1R)-1-hydroxyethyl]-2-methyl-7-oxo-4-thia-1-azabicyclo[3.2.0]hept-2-en-3-yl]methyl]methylamino]- [CAS]	19982-08-2	EP 392059	Cognition enhancer	Dementia, AIDS-related
MEN-10700		195874-55-6	WO 9406803	Beta-lactam antibiotic	Infection, general

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MEN-10755	5,12-Naphthacenedione, 7-[[4-O-(3-amino-2,3,6-trideoxy-Alpha-L-lyxo-hexopyranosyl)-2,6-dideoxy-Alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,9,11-trihydroxy-9-(hydroxyacetyl)-, hydrochloride, (7S,9S)- [CAS]	169317-77-5	WO 9509173	Anticancer, antibiotic	Cancer, breast
Menadiol		481-85-6			
Menadione		58-27-5			
Menadoxime		573-01-3			
Menbutone		3562-99-0			
Menogaril		71628-96-1			
MENT	7Alpha-Methyl-19-nortestosterone			Formulation, transdermal, systemic	Contraceptive, male
menthol	Cyclohexanol, 5-methyl-2-(1-methylethyl)- [CAS]	1490-04-6 89-78-1		Formulation, dermal, topical	Pruritus
Menthyl Valerate		89-47-4			
Meobentine		46464-11-3			
Meparfynol		77-75-8			
mepartricin	Partricin, methyl ester [CAS]	11121-32-7	US 3780173	Antifungal	Infection, Candida, general
Mepazine		60-89-9			
Mepenzolate Bromide		76-90-4			
Meperidine		57-42-1			
Mephenesin		59-47-2			
Mephenoxalone		70-07-5			
Mephentermine		100-92-5			
Mephenytoin		50-12-4			
Mephobarbital		115-38-8			
Mepindolol		23694-81-7			
Mepitiostane		21362-69-6			
mepivacaine	N-(2,6-Dimethylphenyl)-1-methyl-2-piperidinecarboxamide	96-88-8		Formulation, modified-release, >24hr	Pain, post-operative
Mepixanox		17854-59-0			



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Meprednisone		1247-42-3			
Meprobamate		57-53-4			
meproscllarin	Bufa-4,20,22-trienolide, 3-[(6-deoxy-4-O-methyl-Alpha-L-mannopyranosyl)oxy]-14-hydroxy-, (3S)- [CAS]	33396-37-1	DE 1910207	Cardio stimulant	Heart failure
mep tazinol	Phenol, 3-(3-ethylhexahydro-1-methyl-1H-azepin-3-yl)- [CAS]	54340-58-8 59263-76-2	GB 1285025	Analgesic, other	Pain, general
mequitazine	10H-Phenothiazine, 10-(1-azabicyclo[2.2.2]oct-3-ylmethyl)- [CAS]	29216-28-2	GB 1250534	Antiallergic, non-asthma	
Meralein		4386-35-0			
Meralluride		8069-64-5			
Merbromin		129-16-8			
Mercaptomerin		21259-76-7			
Mercumallylic Acid		86-36-2			
Mercuric Chloride, Ammoniated		10124-48-8			
Mercuric Oleate		1191-80-6			
Mercuric Oxycyanide		1335-31-5			
merimepodib	Carbamic acid, ((3-(((3-methoxy-4-(5-oxazolyl)phenyl)amino)carbonyl)amino)phenyl)methyl)- (3S)-tetrahydro-3-furanyl ester [CAS]	198821-22-6	US 5807876	Antiviral, other	Infection, hepatitis-C virus
meropenem	1-Azabicyclo[3.2.0]hept-2-ene-2-carboxylic acid, 3-[[5-[(dimethylamino)carbonyl]-3-pyrrolidinyl]thio]-6-(1-hydroxyethyl)-4-methyl-7-oxo-, [4R-[3(3S*,5S*),4Alpha,5R,6R(R*)]]- [CAS]	96036-03-2	EP 126587	Beta-lactam antibiotic	Infection, respiratory tract, lower
Mersalyl		492-18-2			
Mesalamine		89-57-6			
mesalazine	Benzoic acid, 5-amino-2-hydroxy- [CAS]	89-57-6	WO 5541170	Formulation, oral, other	Colitis, ulcerative
Mesna		19767-45-4			
Mesoridazine		5588-33-0			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Mestanolone	Carbamic acid, [[(8S)-1,6-dimethylergolin-8-yl]methyl]-, phenylmethyl ester [CAS]	521-11-9	GB 1401935	Antiprolactin Formulation, modified-release, <=24hr	Amenorrhoea Diabetes, Type II
Mesterolone		1424-00-6			
Mestranol		72-33-3			
Mesulfen		135-58-0			
Metaclozepam		84031-17-4			
Metampicillin		6489-97-0			
Metapramine		21730-16-5			
Metaproterenol		586-06-1			
Metaraminol		54-49-9			
Metazocine		3734-52-9			
metergoline		17692-51-2			
metformin		21631-37-8			
Methacholine		2706-42-5			
Methacycline		657-24-9			
Methadone		62-51-1			
Methafurylene		914-00-1			
Methamphetamine		76-99-3			
Methandriol	Imidodicarbonimidic diamide, N,N-dimethyl- [CAS]	531-06-6			
Methandrostenolone		537-46-2			
Methantheline		521-10-8			
Methapyrilene		72-63-9			
Methaqualone		53-46-3			
Metharbital		91-80-5			
Methazolamide		72-44-6			
Methdilazine		50-11-3			
Methenamine		554-57-4			
Methenolone		1982-37-2			
Methestrol		100-97-0			
Methetoin		153-00-4			
Methicillin		130-73-4			
		5696-06-0			
		132-92-3			

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Methimazole	L-Glutamic acid, N-[4-[[[(2,4-diamino-6-pteridiny)]methyl]methylamino]benzoyl]-[CAS]	60-56-0	US 2512572	Anticancer, antimetabolite	Cancer, general
Methiodal		126-31-8			
Methionnic Acid		503-40-2			
Methionine		63-68-3			
Methisazone		1910-68-5			
Methitural		467-43-6			
Methixene		21214969			
Methocarbamol		532-03-6			
Methohexital		22151-68-4			
methotrexate		59-05-2			
Methotrimeprazine		60-99-1			
Methoxamine		390-28-3			
Methoxsalen		298-81-7			
Methoxyflurane		76-38-0			
Methoxyphenamine		93-30-1			
Methoxypromazine		61-01-8			
Methscopolamine		155-41-9			
Methsuximide		77-41-8			
Methyclothiazide		135-07-9			
Methyl Blue		28983-56-4			
Methyl Nicotinate		93-60-7			
Methyl Propyl Ether	L-Tyrosine, 3-hydroxy-Alpha-methyl-[CAS]	557-17-5		Formulation, modified-release, <=24hr	Hypertension, general
Methyl Salicylate		119-36-8			
Methyl tert-Butyl Ether		1634-04-4			
Methylbenzethonium Chloride		25155-18-4			
Methylcobalamin		13422-55-4			
methyl dopa		555-30-6			
Methylene Blue		61-73-4			
Methylergonovine		113-42-8			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Methylhexaneamine</b>	2-Piperidineacetic acid, Alpha-phenyl-, methyl ester [CAS]	105-41-9		Formulation, modified-release, multi	Attention deficit disorder
methylphenidate		113-45-1			
		298-59-9			
<b>Methylprednisolone</b>		83-43-2			
	Pregna-1,4-diene-3,20-dione, 21-(acetyloxy)-11-hydroxy-6-methyl-17-(1-oxopropoxy)-, (6Alpha,11Beta) [CAS]	86401-95-8	EP 72547	Antipruritic/inflamm, allergic	Pruritus
methylprednisolone aceponate					
	Pregna-1,4-diene-3,20-dione, 11,17-dihydroxy-6-methyl-21-[[8-[methyl(2-sulfoethyl)amino]-1,8-dioxooctyl]oxy]-, monosodium salt, (6Alpha,11Beta) [CAS]	90350-40-6	JP 59137500	Antiasthma	Asthma
methylprednisolone suleptanate					
<b>Methylthiouracil</b>		56-04-2			
<b>Methyltrienolone</b>		965-93-5			
<b>Methyprylon</b>		125-64-4			
<b>Methysergide</b>		361-37-5			
<b>Metiazinic Acid</b>		13993-65-2			
	Phenol, 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-2,3,6-trimethyl-, 1-acetate [CAS]	22664-55-7	GB 1206148	Antihypertensive, adrenergic	
metipranolol					
	Benzamide, 4-amino-5-chloro-N-[2-(diethylamino)ethyl]-2-methoxy- [CAS]	364-62-5		Formulation, modified-release, <=24hr	Gastro-oesophageal reflux
<b>Metocurine Iodide</b>		7601-55-0			
<b>Metofenazate</b>		388-51-2			
	6-Quinazolinesulfonamide, 7-chloro-1,2,3,4-tetrahydro-2-methyl-3-(2-methylphenyl)-4-oxo- [CAS]	17560-51-9	US 4517179	Antihypertensive, diuretic	
metolazone		14008-44-7			
<b>Metopimazine</b>		143-52-2			
<b>Metopon</b>		51384-51-1			
	2-Propanol, 1-[4-(2-methoxyethyl)phenoxy]-3-[(1-methylethyl)amino]-, (+/-)- [CAS]	56392-17-7			
metoprolol		37350-58-6			
<b>Metralindole</b>		54188-38-4			
<b>Metrizamide</b>		31112-62-6		Formulation, modified-release, other	Hypertension, general
<b>Metrizoic Acid</b>		1949-45-7			
<b>Metron S</b>		13946-02-6			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Metyrapone	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-6-[[[3-(methylsulfonyl)-2-oxo-1-imidazolidinyl]carbonyl]amino]phenylacetyl [amino]-7-oxo-, [2S-[2Alpha,5Alpha,6Beta(S*)]]- [CAS]	54-36-4	GB 1301961	Penicillin, injectable	Infection, general
Metyrosine		672-87-7			
Mexazolam		31868-18-5			
Mexenone		1641-17-4			
Mexiletine		31828-71-4			
mezlocillin	Benzenecarboximidic acid, 3,4,5-trihydroxy-, ethyl ester, hydrochloride	42057-22-7	US 4623659	Cardiovascular	Reperfusion injury
		51481-65-3			
		72539-76-5			
MFH-244	Dibenzo[c,f]pyrazino[1,2-a]azepine, 1,2,3,4,10,14b-hexahydro-2-methyl- [CAS]	95933-76-9	GB 1173783	Antidepressant	Depression, general
mianserin		21535-47-7			
		24219-97-4			
		116644-53-2			
Mibefradil	1H-Imidazole, 1-(2,4-dichlorophenyl)-2[2,4-dichlorophenyl)methoxy]ethyl]	103775-75-3		Formulation, modified-release, other	Infection, Candida, general
Miboplatin		235114-32-6			
Micafungin					
miconazole	1H-Purine-2,6-dione, 8-(1-aminocyclopentyl)-3,7-dihydro-1,3-dipropyl- [CAS]	22916-47-8	US 5378844	Cardiovascular	Unspecified
Micronomicin		52093-21-7			
midaxifylline		151159-23-8			
midazolam	Leucomycin V, 3,4B-dipropanoate [CAS]	59467-70-8	US 4280957	Anaesthetic, injectable	Infection, general
		59467-94-6			
		35457-80-8			
midecamycin	2-Thiophenecarbothioic acid, S-[1-methyl-2-oxo-2-[[tetrahydro-2-oxo-3-thienyl]amino]ethyl] ester [CAS]	55881-07-7	JP 49124087	Macrolide antibiotic	Infection, general
midecamycin acetate					
midesteine		94149-41-4			
			EP 120534	COPD treatment	Emphysema, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
midodrine	Acetamide, 2-amino-N-[2-(2,5-dimethoxyphenyl)-2-hydroxyethyl]- [CAS]	42318-56-0	EP 164571	Urological	Incontinence
	Benzamide, N-(2,3,10,11,12,13-hexahydro-10-methoxy-9-methyl-1-oxo-9,13-epoxy-1H,9H-diindolo[1,2,3-g:3',2',1'-Im]pyrrolo[3,4-j][1,7]benzodiazonin-11-yl)-N-methyl-, (9Alpha,10Beta,11Beta,13Alpha)-[CAS]	120685-11-2			
midostaurin	Estra-4,9-dien-3-one, 11-[4-(dimethylamino)phenyl]-17-hydroxy-17-(1-propynyl)-, (11Beta,17Beta)- [CAS]	84371-65-3	EP 57115	Abortifacient	Abortion
miglitol	3,4,5-Piperidinetriol, 1-(2-hydroxyethyl)-2-(hydroxymethyl)-, [2R-(2Alpha,3Beta,4Alpha,5Beta)]- [CAS]	72432-03-2	EP 55431	Antidiabetic	Diabetes, Type I
	3,4,5-Piperidinetriol, 1-butyl-2-(hydroxymethyl)-[2R-(2Alpha,3Beta,4Alpha,5Beta)] [CAS]	72599-27-0			
miglustat	Hydrazinium, 2-(2-carboxyethyl)-1,1,1-trimethyl-, inner salt- [CAS]	76144-81-5	WO 8001068	Cardiostimulant	Heart failure
mildronate	Cyclopropanecarboxamide, 2-(aminomethyl)-N,N-diethyl-1-phenyl-, cis-(+)-[CAS]	101152-94-7 92623-85-3	US 4478836	Antidepressant	Depression, general
milnacipran	[3,4'-Bipyridine]-5-carbonitrile, 1,6-dihydro-2-methyl-6-oxo- [CAS]	37065-29-5			
Miloxacin	Ethanaminium, 2-[[[hexadecyloxy]hydroxyphosphinyloxy]-N,N,N-trimethyl-, hydroxide, inner salt [CAS]	78415-72-2	US 4313951	Cardiostimulant	Heart failure
	4-Morpholineethanamine, N-(4-methyl-6-phenyl-3-pyridazinyl)- [CAS]	53949-20-5 58066-85-6			
miltefosine		25905-77-5	EP 225608	Anticancer, other	Cancer, skin, general
minaprine		25953-17-7	GB 1345880	Antidepressant	Depression, general

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minocycline	2-Naphthacene-carboxamide, 4,7-bis(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-, [4S-(4 $\alpha$ ),4 $\alpha$ ], 5 $\alpha$ .alpha., 12 $\alpha$ ], [CAS]	10118-90-8		Formulation, optimized, microparticles	Infection, oral
minodronic acid	Phosphonic acid, (1-hydroxy-2-imidazo(1,2-a)pyridin-3-ylethylidene)bis-, [CAS]	180064-38-4	EP 354806	Anticancer, other	Cancer, myeloma
minoxidil	2,4-Pyrimidinediamine, 6-(1-piperidinyl)-, 3-oxide [CAS]	38304-91-5	US 4139619	Vasodilator, peripheral	Hypertension, general
Miokamycin		55881-07-7			
mirtazapine	Pyrazino[2,1-a]pyrido[2,3-c][2]benzazepine, 1,2,3,4,10,14b-hexahydro-2-methyl-[CAS]	85650-52-8 61337-67-5	GB 1543171	Antidepressant	Depression, general
misoprostol	Prost-13-en-1-oic acid, 11,16-dihydroxy-16-methyl-9-oxo-, methyl ester, (11 $\alpha$ ,13 $\epsilon$ )-(±)- [CAS]	59122-46-2 59122-48-4	US 4301146	Prostaglandin	Ulcer, gastric
miteminal	Erythromycin, 8,9-didehydro-N-demethyl-9-deoxo-6,11-dideoxy-6,9-epoxy-12-O-methyl-N-(1-methylethyl)-11-oxo-, (2E)-2-butenedioate (2:1) [CAS]	154802-96-7	WO 9324509	Gastroprokinetic	Gastro-oesophageal reflux
mitiglinide	Calcium (2S)-2-benzyl-3-(cis-hexahydro-2-isindolylcarbonyl)propionate, dihydrate- [CAS]	145525-41-3	EP 507534	Antidiabetic	Diabetes, Type II
Mitobronitol		488-41-5			
Mitoguazone		459-86-9			
mitolactol	Galactitol, 1,6-dibromo-1,6-dideoxy- [CAS]	10318-26-0	US 3993781	Anticancer, alkylating	Cancer, cervical

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mitomycin	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aAlpha,8S,8aAlpha,8bAlpha)]- [CAS]	50-07-7		Formulation, parenteral, other	Cancer, stomach
<b>Mitotane</b>		53-19-0			
mitoxantrone	9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-[CAS]	65271-80-9 70476-82-3	US 4197249	Anticancer, other	Cancer, breast
mitoxantrone	9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-[CAS]	65271-80-9 70476-82-9		Formulation, optimized, liposomes Antiviral, other	Cancer, general Infection, hepatitis-B virus
MIV-210	(3'-Fluoro-2'-3'-dideoxy guanosine)				
	Isoquinolinium, 2,2'-[(1,8-dioxo-4-octene-1,8-diyl)bis(oxy-3,1-propanediyl)]bis[1,2,3,4-tetrahydro-6,7-dimethoxy-2-methyl-1-[(3,4,5-trimethoxyphenyl)methyl]-, dichloride, [R*,R*-(E)]]- [CAS]	106861-44-3 125472-02-8	EP 181055	Muscle relaxant	Anaesthesia, adjunct
mivacurium					
<b>Mivazerol</b>					
mizolastine	4(1H)-Pyrimidinone, 2-[[1-{1-[(4-fluorophenyl)methyl]-1H-benzimidazol-2-yl]-4-piperidinyl]methylamino]- [CAS]	108612-45-9 50924-49-7	EP 217700	Antiallergic, non-asthma	Rhinitis, allergic, general
<b>Mizoribine</b>					
MKC-733	(R)-N-(3-quinuclidinyl)-7-oxo-4,7-dihydrothieno[3,2-b]pyridine-6-carboxamide hydrochloride	194093-42-0	JP 09216888	Gastroprokinetic	Gastro-oesophageal reflux
MLN-519	6-Oxa-2-azabicyclo[3.2.0]heptane-3,7-dione, 1-[(1S)-1-hydroxy-2-methylpropyl]-4-propyl-, (1R,4R,5S)- [CAS]	211866-70-5	WO 9915183	Neuroprotective	Ischaemia, cerebral
MLN-576	4-Methoxy-benzo[a]phenazine-11-carboxylic acid (2-(dimethylamino)-1-(R)-methyl-ethyl)-amide			Anticancer, other	Cancer, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
moclobemide	Benzamide, 4-chloro-N-[2-(4-morpholinyl)ethyl]- [CAS]	71320-77-9	EP 326023	Antidepressant	Depression, general
modafinil	Acetamide, 2-[(diphenylmethyl)sulfinyl]- [CAS]	68693-11-8	DE 2809625	Psychostimulant	Narcolepsy
moexipril	3-Isoquinolinecarboxylic acid, 2-[2-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]-1,2,3,4-tetrahydro-6,7-dimethoxy- (3S-(2(R*(R*),3R*)))- [CAS]	103775-10-6 103775-14-0	US 4344949	Antihypertensive, renin system	Hypertension, general
Mofarotene	5-Isoxazoleacetic acid, 3,4-bis(4-methoxyphenyl)- [CAS]	125533-88-2	EP 26928	Analgesic, NSAID	Pain, post-operative
Mofebutazone		2210-63-1			
Mofegiline		119386-96-8			
mofezolac		78967-07-4			
MOL-6131	N-[4-(aminomethyl)benzyl]-8(S)-[1-[4-[2-(4-aminophenyl)-acetamido]butyl]piperidin-4-yl]-2-(naphthalen-1-ylmethyl)-1,3-dioxo-2,3,5,8-tetrahydro-1H-[1,2,4]triazolo[1,2-a]pyridazine-5(R)-carboxamide			Antiasthma	Asthma
Molindone	Sydhone imine, N-(ethoxycarbonyl)-3-(4-morpholinyl)- [CAS] Pregna-1,4-diene-3,20-dione, 9,21-dichloro-11,17-dihydroxy-16-methyl-, (11β,16α)- [CAS]	7416-34-4	US 3769283	Vasodilator, coronary	Psoriasis
molsidomine		25717-80-0			
mometasone		105102-22-5 83919-23-7			
Monatepil		103377-41-9			
Monobenzone	Dodecanoic acid, monoester with 1,2,3-propanetriol [CAS] Cyclopropaneacetic acid, 1-[[[1-[3-[2-(7-Chloro-2-quinolinyl)ethenyl]phenyl]-3-[2-(1-hydroxy-1-methylethyl)phenyl]propyl]thio]methyl]-, [CAS]	103-16-2	US 4885282	Dermatological	Ichthyosis
monolaurin		27215-38-9			
montelukast		151767-02-1 158966-92-8			
Monteplase		122007-85-6		Antiasthma	Asthma

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Moperone	Carbamic acid, [10-[3-(4-morpholinyl)-1-oxopropyl]-10H-phenothiazin-2-yl]-, ethyl ester [CAS]	1050-79-9	US	Antiarrhythmic	Tachycardia, ventricular
Mopidamol		13665-88-8			
Moprolol		5741-22-0			
morazine	Morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl- (5 $\alpha$ ), [CAS]	29560-58-5	US	Formulation, parenteral, other Formulation, inhalable, systemic	Pain, cancer Pain, general
Morazone		31883-05-3			
Moricizine		6536-18-1			
Moroxycine		3731-59-7			
Morphazinamide		952-54-5			
morphine		57-27-2			
morphine-6-glucuronide	Spiro[imidazo[1,2-a]pyridine-3(2H),4'-piperidin]-2-one, 1'-[3-(3-chloro-10,11-dihydro-5H-dibenz[b,f]azepin-5-yl)propyl]hexahydro-, (+/-)- [CAS]	6055-06-7	US	Neuroleptic	
mosapramine		89419-40-9			
mosapride		98043-60-8			
	Benzamide, 4-amino-5-chloro-2-ethoxy-N-(((4-((4-fluorophenyl)methyl)-2-morpholinyl)methyl)- [CAS]	112885-41-3	EP	GI inflammatory/bowel disorders	Gastritis
		112885-42-4			
motexafin gadolinium	Gadolinium, bis(acetato-kappaO)(9,10-diethyl-20,21-bis(2-(2-(2-methoxyethoxy)ethoxy)ethoxy)-4,15-dimethyl-8,11-imino-3,16:16,13-dinitrilo-1,18-benzodiazacycloicosine-5,14-dipropanolato-kappaN1, kappaN18, kappaN23, kappaN24, kappaN25), (PB-7-11-233'2'4) [CAS]	246252-06-2		Radio/chemosensitizer	Cancer, brain
Motretinide		56281-36-8			
Moveltipril		85856-54-8			
Moxalactam		64952-97-2			
Moxastine		3572-74-5			
Moxaverine		10539-19-2			
Moxestrol		34816-55-2			

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moxifloxacin	3-Quinolonecarboxylic acid, 1-cyclopropyl-6-fluoro-1,4-dihydro-8-methoxy-7-(octahydro-6H-pyrrolo(3,4-b)pyridin-6-yl)-4-oxo-, hydrochloride (4aS-cis)- [CAS]	186826-86-8 151096-09-2	DE 19546249	Quinolone antibacterial	Infection, respiratory tract, general
moxisylyte	Phenol, 4-[2-(dimethylamino)ethoxy]-2-methyl-5-(1-methylethyl)-, acetate (ester), [CAS]	964-52-3 54-32-0		Male sexual dysfunction	Impotence
moxonidine	5-Pyrimidinamine, 4-chloro-N-(4,5-dihydro-1H-imidazol-2-yl)-6-methoxy-2-methyl- [CAS]	75438-57-2	DE 2849537	Antihypertensive, other	Hypertension, general
M-PGA	(-)-(S)-2-Methyl-2-(1-oxo-2,3-dihydro-1H-isoindol-2-yl)pentanedioic acid		US 5712291	Anticancer, other	Cancer, general
MPI-5010	Platinum diamminedichloro-, (SP-4-2) + (R)-4-[1-hydroxy-2-(methylamino)-ethyl]-1,2-benzenediol		US 6224883	Formulation, parenteral, other	Cancer, head and neck
MPI-5020	2,4(1H,3H)-Pyrimidinedione, 5-fluoro- [CAS]	51-21-8	US 5750146	Formulation, parenteral, other	Cancer, breast
MPL		198076-81-2		Immunostimulant, other	Vaccine adjunct
MRS-1754			US 6060481	Antiasthma	Asthma
MS-209	1-Piperazineethanol, 4-(diphenylacetyl)-Alpha-[(5-quinolin-2-yl)methyl]-, (2E)-2-butenedioate(2:3) (salt) [CAS]	158681-49-3		Radio/chemosensitizer	Cancer, breast
MS-275	N-(2-Aminophenyl)-4-[N-(pyridin-3-yl-methoxycarbonyl)aminomethyl]benzamide			Anticancer, antimetabolite	Cancer, lung, general
MS-325		201688-00-8	EP 839805	Neuroleptic	Schizophrenia
MS-377					
Mupirocin		12650-69-0			
Muscarine		300-54-9			
Muzolimine		55294-15-0			
MX-1013			US 6153591	Hepatoprotective	Unspecified

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
mycophenolate mofetil	4-Hexenoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-, 2-(4-isobenzofuranyl)-4-methyl-, (E)- [CAS] morpholinylethyl ester, (E)- [CAS]	116680-01-4 128794-94-5	WO 9119498	Immunosuppressant	Transplant rejection, general
mycophenolic acid	4-hexanoic acid, 6-(1,3-dihydro-4-hydroxy-6-methoxy-7-methyl-3-oxo-5-isobenzofuranyl)-4-methyl-,	37415-62-6 24280-93-1		Formulation, oral, enteric-coated	Transplant rejection, general
Myrophine		467-18-5			
N- (Hydroxymethyl)nicotina mide		3569-99-1			
N,N,N',N'- Tetraethylphthalamide		83-81-8			
N <sub>2</sub> -Formylsulfisomidine		795-13-1			
N <sub>4</sub> -β- Glucosylsulfanilamide		53274-53-6			
N <sub>4</sub> - Sulfanilylsulfanilamide		547-52-4			
Nabilone		51022-71-0			
nabumetone	2-Butanone, 4-(6-methoxy-2-naphthalenyl)- [CAS]	42924-53-8	GB 1476721	Anti-inflammatory	Arthritis, osteo
N-acetylcysteine	L-Cysteine, N-acetyl- [CAS]	616-91-1		Anticancer, other	Cancer, general
N-Acetylmethionine		65-82-7			
nadifloxacin	1H,5H-Benzo[ <i>j</i> ]quinoline-2-carboxylic acid, 9-fluoro-6,7-dihydro-8-(4-hydroxy-1-piperidinyl)-5-methyl-1-oxo-, (+/-)- [CAS]	124858-35-1	US 4399134	Quinolone antibacterial	Acne
nadolol	2,3-Naphthalenediol, 5-[3-[(1,1-dimethylethyl)amino]-2-hydroxypropoxy]-1,2,3,4-tetrahydro- [CAS]	42200-33-9	US 4346106	Antihypertensive, adrenergic	
Nadoxolol		54063-51-3			



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nafamostat	Benzoic acid, 4- [(aminoiminomethyl)amino]-, 6- (aminoiminomethyl)-2-naphthalenyl ester- [CAS]	80251-32-7 81525-10-2 82956-11-4	EP 450232	GI inflammatory/bowel disorders	Pancreatitis
nafarelin	Luteinizing hormone-releasing factor (pig), 6-[3-(2-naphthalenyl)-D-alanine]-[CAS]	76932-56-4 86220-42-0	EP 21234	Releasing hormones	Endometriosis
<b>Nafcillin</b>		147-52-4			
<b>Nafronyl</b>		31329-57-4			
naftidrofuryl	2-Furanpropanoic acid, tetrahydro-Alpha- (1-naphthalenylmethyl)-, 2- (diethylamino)ethyl ester	31329-57-4		Formulation, modified-release, other	Unspecified
naftifine	1-Naphthalenemethanamine, N-methyl-N- (3-phenyl-2-propenyl)-, (E)- [CAS]	65472-88-0 65473-14-5	US 4282251	Antifungal	Infection, dermatological
naftopidil	1-Piperazineethanol, 4-(2-methoxyphenyl)- Alpha-[(1-naphthalenylloxy)methyl]- [CAS]	57149-07-2	US 3997666	Antihypertensive, adrenergic	Hypertension, general
nalbuphine	Morphinan-3,6,14-triol, 17- (cyclobutylmethyl)-4,5-epoxy-, (5Alpha,6Alpha)- [CAS]	20594-83-6 23277-43-2	US 3393197	Analgesic, other	Pain, general
<b>Nalidixic Acid</b>		389-08-2			
nalmeffene	Morphinan-3,14-diol, 17- (cyclopropylmethyl)-4,5-epoxy-6- methylene-, (5Alpha)-[CAS]	55096-26-9	JP 56167687	Dependence treatment	Poisoning, drug
<b>Nalorphine</b>		62-67-9			
naloxone	Morphinan-6-one, 17-allyl-4,5Alpha-epoxy- 3,14-dihydroxy-, hydrochloride [CAS]	357-08-4 465-65-6		Septic shock treatment	
naltrexone	Morphinan-6-one, 17-(cyclopropylmethyl)- 4,5-epoxy-3,14-dihydroxy-, (5Alpha)-[CAS]	16590-41-3 16676-29-2	US 3332950	Dependence treatment	Addiction, narcotic/opiate
NAMI	Imidazolium trans(imidazole)(dimethylsulfoxide)tetrachl ororuthenate (III)			Anticancer, other	Cancer, general

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naminidil	Guanidine, N-cyano-N'-(4-cyanophenyl)-N"-[(1R)-1,2,2-trimethylpropyl]-[CAS]	220641-11-2		Dermatological	Alopecia, general
Nandrolone		434-22-0			
Naphazoline		835-31-4			
Naphthalene		91-20-3			
naproxen betainate	Methanaminium, 1-carboxy-N, N, N-trimethyl- salt with (R)-6-methoxy-Alpha-methyl-2-naphthaleneacetic acid (1:1), sodium salt [CAS]	104124-26-7	US 4672077	Antiarthritic, other	Arthritis, rheumatoid
naproxen	2-Naphthaleneacetic acid, 6-methoxy-Alpha-methyl-, [CAS]	26159-34-2	GB 1211134	Analgesic, NSAID	Pain, general
naratriptan	1H-Indole-5-ethanesulfonamide, N-methyl-3-(1-methyl-4-piperidinyl)- [CAS]	22204-53-1	EP 303507	Antimigraine	Migraine
Narceine		121679-13-8			
Narcobarbital		131-28-2			
Natamycin		125-55-3			
		7681-93-8			
nateglinide	D-phenylalanine, N-[(4-(1-methylethyl)cyclohexyl)carbonyl]-, trans-[CAS]	105816-04-4	EP 196222	Antidiabetic	Diabetes, Type II
N-Butyldideoxynojirimycin		72599-27-0			
N-Butylscopolammonium Bromide		149-64-4			
NC-503			US 5643562	Anti-inflammatory	Amyloidosis
NC-531			US 5643562	Cognition enhancer	Alzheimer's disease
NCX-1000			WO 0061604	Hepatoprotective	Cirrhosis, hepatic
NCX-4016	Benzoic acid, 2-(acetyloxy)-, 2-((nitrooxy)methyl)phenyl ester [CAS]	175033-36-0	WO 9716405	Symptomatic antidiabetic	Insulin-related metabolic syndrome
NCX-456	Benzoic acid, 5-amino-2-hydroxy-, 4-(nitrooxy)butyl ester [CAS]	256499-26-0		GI inflammatory/bowel disorders	Inflammatory bowel disease

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NCX-950	Alpha'-[[[(1,1-dimethylethyl)amino]methyl]-4-hydroxy]-1,3-benzenedimethanol nitrate			Antiasthma	Asthma
n-Docosanol		661-19-8			
	Benzeneethanamine, 4-methoxy-3-(2-phenylethoxy)-N,N-dipropyl-, hydrochloride [CAS]	149409-57-4	WO 9307113	Neuroleptic	Schizophrenia
NE-100		561-83-1			
Nealbarbital					
	2H-1-Benzopyran-2-methanol, Alpha,Alpha'-[iminobis(methylene)]bis[6-fluoro-3,4-dihydro]-, (2R*(R*(S')))-(1+)- [CAS]	118457-14-0 99200-09-6	EP 145067	Antihypertensive, adrenergic	Hypertension, general
nebivolol		163000-63-3	EP 0688312	Cognition enhancer	Unspecified
nebostinel	N1-(4,4-Dimethylcyclohexyl)-L-isoglutamine	97205-34-0			
Nebracetam					
	Platinum, diammine[hydroxyacetato(2-)-O1,O2]-, (SP-4-3)- [CAS]	95734-82-0	EP 216362	Anticancer, alkylating	
nedaplatin					
	4H-Pyrano[3,2-g]quinoline-2,8-dicarboxylic acid, 9-ethyl-6,9-dihydro-4,6-dioxo-10-propyl-, [CAS]	69049-73-6 69049-74-7	EP 555718	Antiasthma, Ophthalmological	Rhinitis, allergic, general, Ocular disorder, general
nedocromil					
	3H-1,2,4-Triazol-3-one, 2-[3-[4-(3-chlorophenyl)-1-piperazinyl]propyl]-5-ethyl-2,4-dihydro-4-(2-phenoxyethyl)-, [CAS]	82752-99-6 83366-66-9	US 4338317	Antidepressant	Depression, general
nefazodone					
	1-Pyrrolidineacetamide, N-(2,6-dimethylphenyl)-2-oxo-, [CAS]	77191-36-7	US 4341790	Cognition enhancer	Dementia, senile, general
nefiracetam					
	1H-2,5-Benzoxazocine, 3,4,5,6-tetrahydro-5-methyl-1-phenyl-, [CAS]	13669-70-0 23327-57-3	US 3487153	Analgesic, NSAID	
nefopam		33404-78-3			
Negamycin					
	3-Isoquinolinecarboxamide, N-(1,1-dimethylethyl)decahydro-2-(2-hydroxy-3-((3-hydroxy-2-methylbenzoyl)amino)-4-(phenylthio)butyl)-, (3S-(2(2S*,3S*),3Alpha,4aß,8aß))-, [CAS]	159989-65-8 159989-64-7		Antiviral, anti-HIV	Infection, HIV/AIDS
nefinavir		75272-39-8			
Nemonapride		59-99-4			
Neostigmine					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
nepadutant	Cyclo[3-amino-L-alanyl-L-leucyl-N-[2-(acetylamino)-2-deoxy-β-D-glucopyranosyl]-L-asparaginy]-L-Alpha-aspartyl-L-tryptophyl-L-phenylalanyl], (4-1)-lactam [CAS]	183747-35-5	WO 9628467	Antiasthma	Asthma
neramexane	1,3,3,5,5-pentamethylcyclohexylamine	202807-80-5 219810-59-0		Dependence treatment	Addiction, alcohol
neridronic acid	Phosphonic acid, (6-amino-1-hydroxyhexylidene)bis- [CAS]	79778-41-9		Musculoskeletal	Osteogenesis imperfecta
Nerifolin		466-07-9			
N-Ethylamphetamine		457-87-4			
neticonazole	1H-imidazole, 1-[2-(methylthio)-1-[2-(pentyloxy)phenyl]ethenyl]-, monohydrochloride, (E)- [CAS]	130773-02-3 130726-68-0	EP 445540	Antifungal	Infection, Candida, general
netilmicin	D-Streptamine, O-3-deoxy-4-C-methyl-3-(methylamino)-β-L-arabinopyranosyl-(1-6)-O-[2,6-diamino-2,3,4,6-tetra-deoxy-Alpha-D-glycero-hex-4-enopyranosyl-(1-4)]-2-deoxy-N1-ethyl- [CAS]	56391-56-1 56391-57-2	GB 1473733	Aminoglycoside antibiotic	Infection, general
nevirapine	6H-Dipyrro[3,2-b:2',3'-e][1,4]diazepin-6-one, 11-cyclopropyl-5,11-dihydro-4-methyl- [CAS]	129618-40-2	EP 429987	Antiviral, anti-HIV	Infection, HIV/AIDS
NGD-98-2			WO 9635689	Anxiolytic	Anxiety, general
Nialamide		51-12-7			
Niaprazine		27367-90-4			
Nicametate		3099-52-3			
nicaraven	3-Pyridinecarboxamide, N,N'-(1-methyl-1,2-ethanediyl)bis- [CAS]	79455-30-4	EP 29602	Neuroprotective	Haemorrhage, subarachnoid
nicardipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, methyl 2-[methyl(phenylmethyl)amino]ethyl ester [CAS]	54527-84-3 55985-32-5	US 3985758	Neuroprotective	Hypertension, general
nicergoline	Ergoline-8-methanol, 10-methoxy-1,6-dimethyl-, (8/b)-, 5-bromo-3-pyridinecarboxylate(ester)	27848-84-6		Formulation, modified-release, other	Unspecified

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Niceritrol		5868053			
Niclosamide		50-65-7			
Nicoclonate		10571-59-2			
Nicofuranose		15351-13-0			
Nicomol		27959-26-8			
Nicomorphine		639-48-5			
nicorandil	3-Pyridinecarboxamide, N-[2-(nitrooxy)ethyl]- [CAS]	65141-46-0	US 4792564	Vasodilator, coronary	Hypertension, general
Nicotinamide		98-92-0			
nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- [CAS]	54-11-5		Formulation, inhalable, other	Addiction, nicotine
Nicotinic Acid		59-67-6			
Nicotinic Acid Benzyl Ester		94-44-0			
Nicotinyl Alcohol		100-55-0			
nifedipine	4-(2-nitrophenyl)-2,6-dimethyl-3,5-dicarbomethoxy-1,4-dihydropyridine	21829-25-4	GB 1173862	Vasodilator, coronary	Hypertension, general
nifekalant	2,4-(1H,3H)-Pyrimidinedione, 6-[2-[(2-nitrophenyl)propyl]amino]ethyl]-1,3-dimethyl-, [CAS]	130636-43-0 130656-51-8	EP 369627	Antiarrhythmic	Arrhythmia, general
Nifenalol		7413-36-7			
Niflumic Acid		4394-00-7			
Nifuratel		4936-47-4			
Nifurfoline		3363-58-4			
Nifuroxazide		965-52-6			
Nifuroxime		6236051			
Nifurpirinol		13411-16-0			
Nifurprazine		1614-20-6			
Nifurtimox		23256-30-6			
Nifurtinol		1088-92-2			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
nifurzide	2-Thiophenecarboxylic acid, 5-nitro-, [3-(5-nitro-2-furanyl)-2-propenylidene]hydrazide [CAS]	39978-42-2	US 3847911	Antidiarrhoeal	Infection, GI tract
NIK-254	Gentamicin, sulfate (salt) [CAS]	1405-41-0		Formulation, other	Infection, general
<b>Nikethamide</b>		59-26-7			
nilutamide	2,4-Imidazolidinedione, 5,5-dimethyl-3-[4-nitro-3-(trifluoromethyl)phenyl]-[CAS]	63612-50-0	US 4472382	Anticancer, hormonal	Cancer, prostate
nilvadipine	3,5-Pyridinedicarboxylic acid, 2-cyano-1,4-dihydro-6-methyl-4-(3-nitrophenyl)-, 3-methyl 5-(1-methylethyl) ester [CAS]	75530-68-6	US 4338322	Antihypertensive, other	Hypertension, general
nimesulide	Methanesulfonamide, N-(4-nitro-2-phenoxyphenyl)- [CAS]	51803-78-2	US 3840597	Anti-inflammatory	Pain, general
<b>Nimetazepam</b>		2011-67-8			
nimodipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, 2-methoxyethyl 1-methylethyl ester [CAS]	66085-59-4	EP 533014	Neuroprotective	
<b>Nimorazole</b>		6506-37-2			
	Urea, N'-[(4-amino-2-methyl-5-pyrimidinyl)methyl]-N-(2-chloroethyl)-N-nitroso-[CAS]	103745-00-2			
nimustine		42471-28-3	GB 1374344	Anticancer, alkylating	Cancer, brain
		55661-38-6			
<b>Ninopterin</b>		2179-16-0			
	N-[4(S)-(Cyclopropylamino)-3-(R)-hydroxy-2,2-dimethyl-7-nitro-3,4-dihydro-2H-1-benzopyran-6-yl]-4-methoxybenzeneacetamide		WO 9804542	Antiarrhythmic	Fibrillation, atrial
NIP-142					
	N'-[3,5-Bis(trifluoromethyl)benzyl]-N-[3-[N-[1-(4-fluorobenzyl)benzimidazol-2-yl]-amino]propyl-N-methylurea hydrochloride			Antipruritic/inflamm, allergic	Eczema, atopic
NIP-531					
	N-[2-[[5-[(dimethylamino)methyl]furfuryl]thio]ethyl]-2-nitro-N'-piperonyl-1,1-ethenediamine	84845-75-0	GB 2104071	Antitumor	Ulcer, GI, general
niperotidine					



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nipradilol	2H-1-Benzopyran-3-ol, 3,4-dihydro-8-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-, 3-nitrate [CAS]	81486-22-8 86247-86-1	EP 42299	Formulation, mucosal, topical	Glaucoma
<b>Niridazole</b>		61-57-4			
nisoldipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-, methyl 2-methylpropyl ester- [CAS]	63675-72-9	GB 1516793	Antihypertensive, other	Hypertension, general
nitazoxanide	Benzamide, 2-(acetyloxy)-N-(5-nitro-2-thiazolyl)- [CAS]	55981-09-4	US 5387598	Protozoacide	Infection, GI tract
nitisinone	1,3-Cyclohexanedione, 2-[2-nitro-4-(trifluoromethyl)benzoyl]- [CAS]	104206-65-7	EP 186118	Metabolic and enzyme disorders	Cirrhosis, hepatic
nitracrine	1,3-Propanediamine, N,N-dimethyl-N'-(1-nitro-9-acridinyl)- [CAS]	4533-39-5 6514-85-8	FR 1458183	Anticancer, other	Cancer, ovarian
<b>Nitrazepam</b>		146-22-5			
nitrendipine	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, ethyl methyl ester- [CAS]	39562-70-4	GB 1358951	Antihypertensive, other	Hypertension, general
nitroflurbiprofen	(1,1'-Biphenyl)-4-acetic acid, 2-fluoro-Alpha-methyl-, 4-(nitrooxy)butyl ester [CAS]	158836-71-6	EP 670825	Urological	Incontinence
<b>Nitrofurantoin</b>		67-20-9			
<b>Nitrofurazone</b>		59-87-0			
nitroglycerin	1,2,3-Propanetriol, trinitrate [CAS]	55-63-0		Formulation, transdermal, patch	Angina, general
<b>Nitromersol</b>		133-58-4			
nitronaproxen	2-Naphthaleneacetic acid, 6-methoxy-Alpha-methyl 4-(nitrooxy)butyl ester (AlphaS)- [CAS]	163133-43-5	WO 9509831	Analgesic, NSAID	Pain, post-operative
nitroxazepine	Dibenz[b,f][1,4]oxazepin-11(10H)-one, 10-[3-(dimethylamino)propyl]-2-nitro-, monohydrochloride [CAS]	16398-39-3	NL 6608671	Antidepressant	
<b>Nitroxoline</b>		4008-48-4			
nizatidine	1,1-Ethenediamine, N-[2-[[[2-[(dimethylamino)methyl]-4-thiazolyl]methyl]thio]ethyl]-N'-methyl-2-nitro- [CAS]	76963-41-2	EP 49618	Antilulcer	Ulcer, duodenal

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<b>Nizofenone</b>	3-(2-methylcarboxymethyl)-6-methoxy-8-hydroxy-isocoumarin	54533-85-6	JP 08176138	Anticancer, other	Cancer, general
NM-3					
NM-702	4-Bromo-5-(3-pyridylmethylamino)-6-[3-(4-chlorophenyl)propoxy]-3(2H)pyridazinone hydrochloride				
<b>N-Methylephedrine</b>		552-79-4		Antithrombotic	Peripheral vascular disease
<b>N-Methylepinephrine</b>		554-99-4			
<b>N-Methylglucamine</b>		6284-40-8			
NN-414	6-chloro-3-(1-methylcyclopropylamino)-4H-thieno[3,2-e]-[1,2,4]thiadiazine-1,1-dioxide			Antidiabetic	Diabetes, Type II
NNC-05-1869	(R)-1-(3-(10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-ylidene)-1-propyl)-3-piperidine carboxylic acid				
<b>Nogalamycin</b>		1404-15-5			
nolatrexed	4(1H)-Quinazolinone, 2-amino-6-methyl-5-(4-pyridinylthio)-, [CAS]	152946-68-4	WO 9320055	Anticancer, antimetabolite	Cancer, liver
	Propanoic acid, 2-methyl-, 5,6,7,8-tetrahydro-6-(methylamino)-1,2-naphthalenediyl ester, hydrochloride, (+/-)-, [CAS]	147149-76-6			
nolomirole		138531-51-8			
nolpitanium	1-Azoniabicyclo[2.2.2]octane, 1-[2-[3-(3,4-dichlorophenyl)-1-[[3-(1-methylethoxy)phenyl]acetyl]-3-piperidinyl]ethyl]-4-phenyl-, chloride, (S)-, [CAS]	153050-21-6	EP 591040	GI inflammatory/bowel disorders	Inflammatory bowel disease
nomegestrol	19-Norpregna-4,6-diene-3,20-dione, 17-(acetyloxy)-6-methyl-, [CAS]	58652-20-3			
<b>Nomifensine</b>		24526-64-5			
<b>Noprylsulfamide</b>		576-97-6	DE 2522533	Menstruation disorders	Menstrual disorder, general
<b>Norbolethone</b>		1235-15-0			

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Nordazepam	3-Quinolonecarboxylic acid, 1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)- [CAS]	1088-11-5	US 4146719	Quinolone antibacterial	Infection, general
Nordefrin		6539-57-7 (unspecified); 74812-63-8 (R*, S*)-(±)- form			
Nordihydroguaiaretic Acid		27686-84-6 (meso-form); 500-38-9 (unspecified)			
Norelgestromin, Ethinyl Estradiol					
Norepinephrine		51-41-2			
Norethandrolone		52-78-8			
Norethindrone	3-Quinolonecarboxylic acid, 1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)- [CAS]	68-22-4	US 4146719	Quinolone antibacterial	Infection, general
Norethynodrel		68-23-5			
Norfenefrine		536-21-0			
norfloxacin		68077-27-0 70458-96-7			
Norgesterone		13563-60-5			
Norgestimate		35189-28-7			
Norgestrel		6533-00-2			
Norgestrienone		848-21-5			
Norlevorphanol		1531-12-0			
Normethadone		467-85-6			
Normethandrone	3-Quinolonecarboxylic acid, 1-ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)- [CAS]	514-61-4	US 4146719	Quinolone antibacterial	Infection, general
Normorphine		466-97-7			
Norphenazone		89-25-8			
Norpipanone		561-48-8			
Norpseudoephedrine		492-39-7			
Nortriptyline		72-69-5			
Norvinisterone		6795-60-4			

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Noscapine	Butanoic acid, 2-[[[5-[4- [(dimethylamino)sulfonyl]phenyl]- 1,2,6,7,8,9-hexahydro-8-methyl-2-oxo-3H- pyrrolo[3,2-h]isoquinolin-3- ylidene]amino]oxy]-3-hydroxy- [CAS] 5-(4-chlorophenyl)-6,7,8,9-tetrahydro-1H- pyrrolo-(3,2-h)naphthalene-2,3-dione-3- oxime	128-62-1	WO 9426747	Antiepileptic	Epilepsy, general
Novembichin		1936-40-9			
Novobiocin		303-81-1			
Noxiptilin		3362-45-6			
Noxythiolin		15599-39-0			
NS-1209	2-Methyl-5-[4-[5-methyl-2-(4- methylphenyl)-4-oxazoly]butyl]-1,3- dioxane-1-2-carboxylic acid	254751-28-5	US 5063222	Neuroprotective Antiallergic, non-asthma	Ischaemia, cerebral Rhinitis, allergic, general
NS-1231					
NS-126					
NS-220	NS 2330 [CAS]	402856-42-2	US 6030785	Hypolipaeamic/Antiatherosclerosis Cognition enhancer Antiviral, other	Atherosclerosis Alzheimer's disease Infection, hepatitis-C virus
NS-2330					
NS5A Inhibitors					
NS-7	Pyrimidine, 4-(4-fluorophenyl)-2-methyl-6- [[[5-(1-piperidinyl)pentyl]oxy]-, monohydrochloride [CAS] 2-Amino-5-(2-fluorophenyl)-4-methyl-1H- pyrrole-3-carbonitrile	178429-67-9	WO 9607641	Neuroprotective	Ischaemia, cerebral
NS-8					
NSC-330507					
NSC-619534	17-Allylaminogeldanamycin 2-chloroethyl phenyl selenone 2,5-diazinidinyl-3-[hydroxymethyl][6-methyl]- 1,4-benzoquinone			Urological Anticancer, antibiotic Anticancer, alkylating	Incontinence Cancer, general Cancer, general
NSC-697726					
N-Sulfanilyl-3,4- xylamide		120-34-3		Anticancer, antibiotic	Cancer, general

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NU-6027	2,4-Pyrimidinediamine, 6-(cyclohexylmethoxy)-5-nitroso- [CAS]	220036-08-8	US	Anticancer, other	Cancer, general
NV-07	2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-sec-pentyl-, 2-oxime [CAS]	53745-16-7		Antipruritic/inflamm, non-allergic	Keratosis
	([3R,4aR,10aR]-1,2,3,4,4a,5,10,10a-Octahydro-6-methoxy-1-methyl-benz[g]quinoline-3-carboxylic acid-4-(4-nitrophenyl)piperazine amide, hydrogen maleate				
NVP-SRA880	(S)-(+)-2-[4-(2-fluorobenzoyloxy)benzylamino]propanamide methanesulfonate		US	Neurological	Unspecified
NW-1029	CPI 22 [CAS]	168021-79-2		Analgesic, other Neuroprotective	Pain, general Ischaemia, cerebral
NYX-059		447-41-6			
Nylidrin		128043-99-2	EP	Symptomatic antidiabetic	Neuropathy, diabetic
NZ-314	1-Imidazolidineacetic acid, 3-[(3-nitrophenyl)methyl]-2,4,5-trioxo- [CAS]		EP	Urological	Renal failure
NZ-419	5-hydroxy-1-methylimidazolidine-2,4-dione		EP	Vasoprotective, topical	Venous insufficiency
Obidoxime Chloride	OC 108 [CAS] Methanone, 2-pyridinyl[7-(4-pyridinyl)pyrazolo[1,5-a]pyrimidin-3-yl]-[CAS]	114-90-9		Anxiolytic	Generalized anxiety disorder
OC-108		162602-62-2			
ocinaplon		96604-21-6			
Octabenzzone	1-Octanamine, N,N'-(1,10-decanediyl)-1(4H)-pyridinyl-4-ylidene)bis- [CAS]	1843-05-6	WO	Stomatological	Periodontitis
Octacaine		13912-77-1			
Octamoxin		4684-87-1			
Octaverine		549-68-8			
		70775-75-6			
octenidine		71251-02-0			
Octodrine		86767-75-1			
Octopamine		543-82-8			
Octotiamine		104-14-3			
		137-86-0			

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octreotide	L-Cysteinamide, D-phenylalanyl-L-cysteinyl-L-phenylalanyl-D-tryptophyl-L-lysyl-L-threonyl-N-[2-hydroxy-1-(hydroxymethyl)propyl]-, cyclic (2-7)-disulfide, [R-(R*, R*)]- [CAS]	83150-76-9		Formulation, fixed-dose combinations	Cancer, general
Octyl		5466-77-3			
Methoxycinnamate					
ofloxacin	7H-Pyrido[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid, 9-fluoro-2,3-dihydro-3-methyl-10-(4-methyl-1-piperazinyl)-7-oxo-, (+/-)- [CAS]	82419-36-1	EP 47005	Quinolone antibacterial	
o-Iodohippurate		133-17-5			
olanzapine	10H-Thieno(2,3-b)(1,5)benzodiazepine, 2-methyl-4-(4-methyl-1-piperazinyl)- [CAS]	132539-06-1	EP 454436	Neuroleptic	Schizophrenia
Oleandrin		465-16-7			
Oleic Acid		112-80-1			
olmesartan medoxomil	1H-Imidazole-5-carboxylic acid, 4-(1-hydroxy-1-methylethyl)-2-propyl-1-(2'-(1H-tetrazol-5-yl)(1,1'-biphenyl)-4-yl)methyl)-, (5-methyl-2-oxo-1,3-dioxol-4-yl) methyl ester [CAS]	144689-63-4	EP 503785	Antihypertensive, renin system	Hypertension, general
olopatadine	11-[(Z)-3-(Dimethylamino)propylidene]-6,11-dihydrodibenz[b,e]oxepin-2-acetic acid, monohydrochloride	113806-05-6 140462-76-6	EP 235796	Ophthalmological	Conjunctivitis
olpadronic acid	Monosodium 3-dimethylamino-1-(hydroxypropylidene)-1,1-bisphosphonate	63132-39-8	WO 9619998	Osteoporosis treatment	Osteoporosis
olsalazine	Benzoic acid, 3,3'-azobis[6-hydroxy- [CAS]	15722-48-2 53200-51-4	US 4559330	GI inflammatory/bowel disorders	Colitis, ulcerative
olipraz	3H-1,2-Dithiole-3-thione, 4-methyl-5-pyrazinyl- [CAS]	64224-21-1	DE 2705641	Anticancer, other	Cancer, general



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OM-294DP	2-[3(R)-(Dodecanoyloxy)tetradecanamido]-N-[4-[3(R)-hydroxytetradecanamido]-5-(phosphonoxy)pentyl]-4-(phosphonoxy)butyramide			Anticancer, immunological	Unspecified
Omacor	ethyl (5Z,8Z,11Z,14Z,17Z)-eicosa-5,8,11,14,17-pentaenoate + ethyl (4Z,7Z,10Z,13Z,16Z,19Z)-docosa-4,7,10,13,16,19-hexaenoate	81926-94-5 86227-47-6		Hypolipaeic/Antiatherosclerosis	Hypertriglyceridaemia
omapatrilat	7H-Pyrido(2,1-b)(1,3)thiazepine-7-carboxylic acid, octahydro-4-((2-mercapto-1-oxo-3-phenylpropyl)amino)-5-oxo, (4S-(4 $\alpha$ )(R*),7 $\alpha$ )(R),10 $\alpha$ )- [CAS]	167305-00-2	US 5508272	Antihypertensive, renin system	Hypertension, general
omeprazole	1H-Benzimidazole, 5-methoxy-2-[[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]- [CAS]	73590-58-6	US 4255431	Antiulcer	Ulcer, GI, general
omiloxetine	Ethanone, 2-[(3R,4S)-3-[(1,3-benzodioxol-5-yloxy)methyl]-4-(4-fluorophenyl)-1-piperidinyl]-1-(4-fluorophenyl)-, rel- [CAS]	176894-09-0		Antidepressant	Depression, general
omoconazole	1H-Imidazole, 1-[2-[2-(4-chlorophenoxy)ethoxy]-2-(2,4-dichlorophenyl)-1-methylethenyl]-, (Z)- [CAS]	74512-12-2	EP 8804	Antifungal	Infection, dermatological
Onapristone	4H-Carbazol-4-one, 1,2,3,9-tetrahydro-9-methyl-3-[(2-methyl-1H-imidazol-1-yl)methyl]- [CAS]	96346-61-1			
ondansetron	Benzoic acid, 4-[(1E)-3-[(2-ethoxy-2-oxoethyl)-2-propenylamino]-2-methyl-3-oxo-1-propenyl]-, 4-(aminoiminomethyl)phenyl ester, monomethanesulfonate [CAS]	99614-01-4 99614-02-5	US 4847281	Antiemetic	Chemotherapy-induced nausea and vomiting
ONO-3403		181586-07-2		GI inflammatory/bowel disorders	Unspecified

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ONO-4128	1,4,9-Triazaspiro(5.5)undecane-2,5-dione, 1-butyl-3-(cyclohexylmethyl)-9-((2,3-dihydro-1,4-benzodioxin-6-yl)methyl)- [CAS]	342394-93-8		Antiviral, anti-HIV	Infection, HIV/AIDS
ONO-8815 Ly	L-lysine (Z)-7-[(1R,2R,3R,5R)-5-chloro-3-hydroxy-2-[(E)-(S)-4-(1-ethylcyclobutyl)-4-hydroxy-1-butenyl]cyclopentyl]-5-heptenoate		US 5756527	Labour inhibitor Radio/chemosensitizer	Labour, preterm Cancer, general
OPC-14523	2-(1H)-Quinolone, 1-[3-[4-(3-chlorophenyl)-1-piperazinyl]propyl]-3,4-dihydro-5-methoxy- [CAS]	145969-30-8	EP 512525	Antidepressant	Depression, general
OPC-31260	Benzamide, N-[4-[5-(dimethylamino)-2,3,4,5-tetrahydro-1H-1-benzazepin-1-yl]carbonyl]phenyl]-2-methyl-	137975-06-5	WO 9105549	Urological	Unspecified
OPC-51803	(5R)-2-[1-(2-chloro-4-(1-pyrolidinyl)benzoyl)-2,3,4,5-tetrahydro-1H-1-benzazepin-5-yl]-N-isopropylacetamide	145739-56-6	WO 9209586	Antidiabetic GI inflammatory/bowel disorders	Diabetes, insipidus Inflammatory bowel disease
OPC-6535	2-Pyridinecarboxylic acid, 6-[2-(3,4-diethoxyphenyl)-4-thiazolyl]- [CAS]	2779-55-7			
Opiniazide	2-(4-trifluoromethylphenyl)-N-methyl-1-phenyl-2-(1-pyrolidinyl)ethylacetamide			Analgesic, other	Pain, general
opioid analgesics		315-72-0			
Opipramol		2574-78-9			
Orazamide					
orazipone	2,4-Pentanedione, 3-((4-methylsulfonyl)phenyl)methylene)- [CAS]	137109-78-5	EP 440324	Antiasthma	Unspecified
Org-12962	Piperazine, 1-[6-chloro-5-(trifluoromethyl)-2-pyridinyl]-, monohydrochloride [CAS]	210821-63-9		Antidepressant Neuroleptic	Depression, general Schizophrenia
Org-24448			US 6166008		

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
oritavancin	Vancomycin, 22-O-(3-amino-2,3,6-trideoxy-3-C-methyl-Alpha-L-arabino-hexopyranosyl)-N3"-[(4'-chloro[1,1'-biphenyl]-4-yl)methyl]-, (4"R)- [CAS]	171099-57-3	US 5840684	Peptide antibiotic	Infection, dermatological
orlistat	L-Leucine, N-formyl-, 1-[(3-hexyl-4-oxo-2-oxetanyl)methyl]dodecyl ester, [2S-[2Alpha(R*),3beta]]- [CAS]	96829-58-2	EP 129748	Anorectic/Antiobesity	Obesity
orneloxifene	Pyrrolidine, 1-[2-(p-(7-methoxy-2,2-dimethyl-3-phenyl-4-chroman-2-yl)phenoxy)ethyl]-, trans- [CAS]	31477-60-8	DE 2329201	Female contraceptive	Contraceptive, female
Ornidazole		16773-42-5			
Ornipressin		3397-23-7			
Ornithine		70-26-8			
ornoprostil	Prost-13-en-1-oic acid, 11,15-dihydroxy-17,20-dimethyl-6,9-dioxo-, methyl ester, (11Alpha,13E,15S,17S)- [CAS]	70667-26-4	US 4278688	Prostaglandin	Ulcer, gastric
Orotic Acid		65-86-1			
Orphenadrine		83-98-7			
Orthocaine		536-25-4			
Osalmid		526-18-1			
osanetant	Acetamide, N-[1-[3-[(3R)-1-benzoyl-3-(3,4-dichlorophenyl)-3-piperidinyl]propyl]-4-phenyl-4-piperidinyl]-N-methyl- [CAS]	160492-56-8	EP 673928	Neuroleptic	Schizophrenia
osaterone	2-Oxapregna-4,6-diene-3,20-dione, 17-(acetyloxy)-6-chloro- [CAS]	105149-00-6	EP 193871	Prostate disorders	Benign prostatic hyperplasia
oseltamivir	1-Cyclohexene-1-carboxylic acid, 4-(acetylamino)5-amino-3-(1-ethylpropoxy)-, ethyl ester, (3R-(3Alpha,(4beta,5Alpha))-[CAS]				
OSI-7836	4'-Thio-beta-D-arabinofuranosylcytosine	196618-13-0	WO 9626933	Antiviral, other	Infection, influenza virus
				Anticancer, antimetabolite	Cancer, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
OSI-7904	Pentanedioic acid, 2-[5-[(1,2-dihydro-3-methyl-1-oxobenzof[quinazolin-9-yl)methyl]amino]-1,3-dihydro-1-oxo-2H-isoindol-2-yl]-, (S)- [CAS]	139987-54-5	WO 9119700	Formulation, optimized, liposomes	Cancer, general
		128607-22-7	WO 9607402	Menopausal disorders	Osteoporosis
ospemifene	Ethanol, 2-[4-[(1Z)-4-chloro-1,2-diphenyl-1-butenyl]phenoxy]- [CAS]	26095-59-0	GB 1181406	Antispasmodic	Irritable bowel syndrome
otilonium bromide	Ethaniminium, N,N-diethyl-N-methyl-2-[[4-[[2-(octyloxy)benzoyl]amino]benzoyl]oxy]-, bromide [CAS]	630-60-4			
Ouabain		33996-33-7			
Oxaceprol		66-79-5			
Oxacillin	Platinum, (1,2-cyclohexanediamine-N,N'')[ethanedioato(2-)-O,O']-, [SP-4-2-(1R-trans)]- [CAS]	26629-87-8	EP 393575	Anticancer, alkylating	Cancer, colorectal
Oxaflozane		61825-94-3			
oxaliplatin		28060-67-5			
Oxalyt-C		15301-80-1			
Oxamarin	1,2,3-Propanetricarboxylic acid, 2-hydroxy-, potassium sodium salt [CAS]	27035-30-9	DE 2249274	Urological	
Oxametacine		21738-42-1			
Oxamniquine		53-39-4			
oxandrolone		36531-26-7			
Oxantel	2-Oxaandrostane-3-one, 17-hydroxy-17-methyl-, (5Alpha,17B)- [CAS]	541-66-2	US 3128283	Reproductive/gonadal, general	Sex-chromosome abnormality, Turner's syndrome
Oxapropanium	2-Oxazolepropanoic acid, 4,5-diphenyl- [CAS]	21256-18-8	GB 1206403	Antiarthritic, other	Arthritis, osteo
oxaprozin	2H-Benzimidazol-2-one, 1-[3-[4-(diphenylmethyl)-1-piperazinyl]propyl]-1,3-dihydro- [CAS]	60607-34-3			
oxatomide	7-Chloro-1,3-dihydro-3-hydroxy-5-phenyl-2H-1,4-benzodiazepin-2-one	604-75-1	GB 1579365	Antiallergic, non-asthma	Rhinitis, allergic, general
oxazepam				Formulation, oral, orally-disintegrating	Anxiety, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
oxazolam	Oxazol[3,2-d][1,4]benzodiazepin-6(5H)-one, 10-chloro-2,3,7,11b-tetrahydro-2-methyl-11b-phenyl- [CAS]	27167-30-2	US 3772371	Anxiolytic	Epilepsy, general
oxcarbazepine	5H-Dibenz[b,f]azepine-5-carboxamide, 10,11-dihydro-10-oxo- [CAS]	28721-07-5 29331-92-8	DE 2011087	Antiepileptic	
Oxeladin	Ethanone, 1-(2,4-dichlorophenyl)-2-(1H-imidazol-1-yl)-, O-[(2,4-dichlorophenyl)methyl]oxime, (Z)- [CAS]	468-61-1	GB 1514870	Antifungal	
Oxendolone		33765-68-3			
Oxethazaine		126-27-2			
Oxetorone		26020-55-3			
oxiconazole		64211-45-6			Infection, fungal, general
Oxidronic Acid		15468-10-7			
Oxiniacic Acid		2398-81-4			
Oxiracetam		62613-82-5			
oxitropium	3-Oxa-9-azoniatricyclo[3.3.1.0 <sub>2,4</sub> ]nonane, 9-ethyl-7-(3-hydroxy-1-oxo-2-phenylpropoxy)-9-methyl-, bromide, [7(S)-(1 $\alpha$ ,2 $\beta$ ,4 $\beta$ ,5 $\alpha$ ,7 $\beta$ )]- [CAS]	30286-75-0	GB 1178305	Antiasthma	
Oxolamine		959-14-8			
Oxolinic Acid		14698-29-4			
Oxophenarsine		538-03-4			
Oxprenolol		6452-71-7			
Oxybenzone		131-57-7			Formulation, modified-release, other
oxybutynin	Benzeneacetic acid, Alpha-cyclohexyl-Alpha-hydroxy-, 4-(diethylamino)-2-butynyl ester- [CAS]	5633-20-5			
Oxycinchophen		485-89-2			
oxycodone	Morphinan-6-one, 4,5-epoxy-14-hydroxy-3-methoxy-17-methyl-, (5 $\alpha$ )	76-42-6		Formulation, transmucosal, nasal	Pain, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Oxyfedrine	Octane, 1-bromo-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- [CAS]	15687-41-9		Haematological	Surgery adjunct
Oxygent		423-55-2			
Oxymesterone		145-12-0			
Oxymetazoline		1491-59-4			
oxymetholone	Androstan-3-one, 17-hydroxy-2-(hydroxymethylene)-17-methyl-, (5 $\alpha$ ), 17 $\beta$ )- [CAS]	434-07-1		Hormone	Anaemia, general
Oxymethurea		140-95-4			
oxymorphone	(5 $\alpha$ )-4,5-Epoxy-3,14-dihydroxy-17-methylmorphinan-6-one [CAS]	76-41-5		Formulation, modified-release, immediate	Pain, general
Oxypendyl		5585-93-3			
Oxypertine		153-87-7			
Oxyphenbutazone		129-20-4			
Oxyphencyclimine		125-53-1			
Oxyphenisatin		115-33-3			
Oxyphenonium		50-10-2			
Oxypinocamphone		10136-65-9			
oxypurinol		2465-59-0		Antigout	Hyperuricaemia
Oxytetracycline		79-57-2			
ozagrel	2-Propenoic acid, 3-[4-(1H-imidazol-1-ylmethyl)phenyl]-, (E)- [CAS]	78712-43-3	GB	Antithrombotic	Vasospasm, cerebral
p-(Benzylsulfonamido)benzoic Acid		82571-53-7			
P-100	Pentanoic acid, 5-amino-4-oxo, methyl ester, hydrochloride [CAS] Di-(3N-[(2S,3S)-2-amino-3-methylpentanoyl]-1,3-thiazolidine)fumarate	536-95-8		Antiviral, anti-HIV	Infection, HIV/AIDS
P-1202					
P32/98		79416-27-6		Dermatological	Keratosis
PA-824					
			US	Antidiabetic	Diabetes, Type II
			US	Antimycobacterial	Infection, tuberculosis
			W/O		

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
PACAP 38	Pituitary adenylate cyclase-activating peptide-38 [CAS]	128606-20-2	US 5128242	Neuroprotective	Nerve injury, general
pacitaxel	5β,20-Epoxy-1,2Alpha,4,7β,10β,13Alpha-hexahydroxytax-11-en-9-one-4,10-diacetate-2-benzoate-13-(Alpha-phenylhippurate)	33069-62-4	US 6413935	Formulation, optimized, nanoparticles Immunostimulant, other	Cancer, breast Vaccine adjunct
PADRE	1H-Isoindol-1-one, 2-(7-chloro-1,8-naphthyridin-2-yl)-2,3-dihydro-3-(5-methyl-2-oxohexyl)- (R)- [CAS]	133737-32-3	US 4960779	Anxiolytic	Panic disorder
pagoclone			WO 9404512	Antithrombotic	Thrombosis, venous
PAI Inhibs					
palindore	8H-1,4-dioxino[2,3-e]indol-8-one,2,3,7,9-tetrahydro-2-[(phenylmethyl)amino]methyl]-, 2(S)-, (2E)-2-butendioate (1:1)	189681-71-8		Neuroleptic	Schizophrenia
Palivizumab	3aS-2-[(S)-1-Azabicyclo[2.2.2]oct-3-yl]-2,3,3a,4,5,6-hexahydro-1-oxo-1H-benz[de]isoquinoline hydrochloride	188039-54-5			
palonosetron		135729-62-3	US 5202333	Antiemetic	Chemotherapy-induced nausea and vomiting
Pamabrom		606-04-2			
Pamaquine		491-92-9			
pamicogrel	1H-Pyrrole-1-acetic acid, 2-[4,5-bis(4-methoxyphenyl)-2-thiazolyl]-, ethyl ester [CAS]	101001-34-7	EP 159677	Antithrombotic	Thrombosis, cerebral
pamidronate	(3-Amino-1-hydroxypropylidene)diphosphonic acid-[CAS]	40391-99-9		Formulation, implant	Hypercalcaemia of malignancy
p-Aminobenzoic Acid		150-13-0			
p-Aminohippuric Acid		61-78-9			
p-Aminopropiophenone		70-69-9			
p-Aminosalicylic Acid		65-49-6			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Panavir	4,4'-isopropylidenedithiobis-2,6-di- <i>t</i> -butylphenol			Neuroprotective	Vasospasm, cerebral
Pancuronium		15500-66-0			
Panipenem		87726-17-8			
Pantethine		16816-67-4			
pantoprazole	1 <i>H</i> -Benzimidazole, 5-(difluoromethoxy)-2-[[[(3,4-dimethoxy-2-pyridinyl)methyl]sulfinyl]-[CAS]	102625-70-7	EP	Antiulcer	Ulcer, duodenal
Pantothenic Acid		79-83-4			
Papain					
Papaverine		58-74-2			
paracetamol	Acetamide, N-(4-hydroxyphenyl)- [CAS]	103-90-2		Formulation, oral, other, modified-release	Pain, general
Paraf lutizide		1580-83-2			
Paraldehyde		123-63-7			
Paramethadione		115-67-3			
Paramethasone		53-33-8			
Paranyline		1729-61-9			
Parathyroid Hormone		9002-64-6			
parecoxib	Propanamide, N-((4-(5-methyl-3-phenyl-4-isoxazolyl)phenyl)sulfonyl)-, sodium salt [CAS]	198470-85-8	WO	Analgesic, NSAID	Pain, post-operative
Parethoxycaine		94-23-5			
Pargyline		555-57-7			
paricalcitol	19-Nor-9,10-secoergosta-5,7,22-triene-1,3,25-triol, (1 <i>α</i> ,3 <i>β</i> ,7 <i>E</i> ,22 <i>E</i> )- [CAS]	131918-61-1	EP	Hormone	Hyperparathyroidism
paromomycin	O-2-Amino-2-deoxy- <i>α</i> -D-glucopyranosyl-(1-4)-O-[O-2,6-diamino-2,6-dideoxy- <i>β</i> -L-idopyranosyl-(1-3)- <i>β</i> -D-ribofuranosyl-(1-5)]-2-deoxy-D-streptamine	7542-37-2		Protozoacide	Infection, leishmaniasis
paroxetine	Piperidine, 3-[(1,3-benzodioxol-5-yloxy)methyl]-4-(4-fluorophenyl)-, (3 <i>S</i> -trans)- [CAS]	61869-08-7	EP	Antidepressant, formulation, oral, orally-disintegrating	Depression, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Paroxypropione</b>		70-70-2			
<b>Parsalmide</b>		30653-83-9			
<b>PaTrin-2</b>	4-Bromothienylguanine			Radio/chemosensitizer	Cancer, melanoma
<b>Pazinacalone</b>		103255-66-9			
	7H-Pyrido[1,2,3-de]-1,4-benzoxazine-6-carboxylic acid, 10-(1-aminocyclopropyl)-9-fluoro-2,3-dihydro-3-methyl-7-oxo-, (S)- [CAS]	127045-41-4			
<b>pazufloxacin</b>		127046-45-1	DE	Quinolone antibacterial	Infection, general
		136905-87-8			
<b>p-Bromoacetanilide</b>		103-88-8	US	Formulation, other	Arthritis, general
<b>PC-NSAIDs</b>					
	6-(2,6-Dichlorophenyl)-2-[4-(diethylaminoethoxy)-phenylamino]-8-pyrido[2,3-D]pyrimidine-7-one			Anticancer, other	Cancer, general
<b>PD-0166285</b>					
<b>Pecilocin</b>		19504-77-9			
	3-Quinolonecarboxylic acid, 1-ethyl-6-fluoro-1,4-dihydro-7-(4-methyl-1-piperazinyl)-4-oxo- [CAS]	70458-92-3	GB	Quinolone antibacterial	Infection, urinary tract
<b>pefloxacin</b>					
	Somatotropin (18-aspartic acid, 21-asparagine, 120-lysine, 167-asparagine, 168-alanine, 171-serine, 172-arginine, 174-serine, 179-threonine (human), pegylated [CAS]	218620-50-9		Somatostatin	Acromegaly
<b>pegvisomant</b>					
<b>Pelletierine</b>		4396-1-4			
	L-Glutamic acid, N-[4-[2-(2-amino-4,7-dihydro-4-oxo-1H-pyrrolo[2,3-d]pyrimidin-5-yl)ethyl]benzoyl]-, disodium salt [CAS]	137281-23-3			
<b>pemetrexed</b>		150399-23-8	US	Anticancer, antimetabolite	Cancer, mesothelioma
	4H-Pyrido[1,2-a]pyrimidin-4-one, 9-methyl-3-(1H-tetrazol-5-yl)- [CAS]	100299-08-9			
<b>pemirolast</b>		69372-19-6	US	Antiasthma	Asthma
<b>Pemoline</b>		2152-34-3			
<b>Pempidine</b>		79-55-0			
<b>PEN-203</b>					
<b>Penamecillin</b>		983-85-7	US	Antiviral, other	Infection, human papilloma virus

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penbutolol	2-Propanol, 1-(2-cyclopentylphenoxy)-3-[[1,1-dimethylethyl)amino]-, (S)-, sulfate (2:1) (salt) [CAS]	38363-32-5 38363-40-5	GB 1215751	Antihypertensive, adrenergic	
peniclovir	6H-Purin-6-one, 2-amino-1,9-dihydro-9-[4-hydroxy-3-(hydroxymethyl)butyl]- [CAS]	39809-25-1 808-71-9	JP 60058982	Antiviral, other	Infection, herpes simplex virus
Penethamate	4-Piperidinol, 1-[4,4-bis(4-fluorophenyl)butyl]-4-[4-chloro-3-(trifluoromethyl)phenyl]- [CAS]	26864-56-2 52-67-5 61-33-6 1538-09-6	DE 2040231	Neuroleptic	
Penicillamine		6130-64-9 525-94-0 87-09-2 87-08-1 4599-60-4			
Penicillin G					
Penicillin G Benzathine					
Penicillin G Procaine					
Penicillin N					
Penicillin O					
Penicillin V					
Penimepicycline					
Penntuss			US 4221778	Formulation, modified-release, other	Rhinitis, allergic, general
Pentaerythritol Chloral		78-12-6 2209-86-1			
Pentaerythritol					
Dichlorohydrin		597-71-7			
Pentaerythritol		5534-95-2 7001-56-1			
Pentagastrin					
Pentagestrone		9005-27-0			
PentaLyte	Starch, 2-hydroxyethyl ether [CAS]	541-20-8	US 5407428	Plasma substitute	Surgery adjunct
Pentamethonium		100-33-4 359-83-1 12111-24-9 67-43-6 138661-02-6		Formulation, inhalable, systemic	Infection, Pneumocystis jiroveci prophylaxis
pentamidine	Benzenecarboximidamide; 4,4'-[1,5-pentanediy]bis(oxy)]bis- [CAS]				
Pentazocine					
Pentetate					
Pentetic Acid					
Pentetreotide					

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Penthienate	Xylan, [CAS]	60-44-6	US	Urological	Inflammation, urinary tract
Pentifylline		1028-33-7			
Pentigetide		62087-72-3			
Pentisomide		78833-03-1			
Pentobarbital		76-74-4			
Pentolinium		52-62-0			
Pentorex		434-43-5			
pentosan		37319-17-8			
pentostatin	Imidazo[4,5-d][1,3]diazepin-8-ol, 3-(2-deoxy-β-D-erythro-pentofuranosyl)-3,6,7,8-tetrahydro-, (R)- [CAS]	53910-25-1	US	Anticancer, antimetabolite	Cancer, leukaemia, hairy cell
pentoxifylline	1H-Purine-2,6-dione, 3,7-dihydro-3,7-dimethyl-1-(5-oxohexyl)- [CAS]			Neuroprotective	Amyotrophic lateral sclerosis
Pentoxyl	Bleomycinamide, N1-[3-[(1-phenylethyl)amino]propyl]-, (S)- [CAS]	147-61-5	US	Anticancer, antibiotic	Parkinson's disease
Pentrinitrol		1607-17-6			
Pentylene tetrazole		54-95-5			
peplomycin		68247-85-8			
Perazine		84-97-9			
Perflubron		423-55-2			
Perfosfamide		62435-42-1; 39800-16-3 (unspecified)			
pergolide		66104-22-1 66104-23-2	US	Antiparkinsonian	
Perhexiline	Ergoline, 8-[(methylthio)methyl]-6-propyl-, (8S)-, monomethanesulfonate- [CAS]	6621-47-2	US		Cancer, prostate
Pericyazine		2622-26-6			
perifosine		157716-52-4	EP	Anticancer, other	
perillyl alcohol		536-59-4	US	Anticancer, other	
Perimethazine		13093-88-4	US	Anticancer, other	

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
perindopril	1H-Indole-2-carboxylic acid, 1-[2-[[1-(ethoxycarbonyl)butyl]amino]-1-oxopropyl]octahydro-, [2S-[1[R*(R*)],2Alpha,3aß,7aß]]-, compd. with 2-methyl-2-propanamine (1:1) [CAS]	107133-36-8 82834-16-0 95153-31-4	EP 49658	Antihypertensive, renin system	Hypertension, general
<b>Periodyl</b>		<b>53586-99-5</b>			
perisoxal	1-Piperidineethanol, Alpha-(5-phenyl-3-isoxazolyl)-, 2-hydroxy-1,2,3-propanetricarboxylate (2:1) (salt) [CAS]	2139-25-5 2055-44-9	JP 04217925	Anti-inflammatory	
<b>Perlapipe</b>		<b>1977-11-3</b>			
<b>Permethrin</b>		<b>52645-53-1</b>			
perospirone	1H-Isindole-1,3(2H)-dione, 2-[4-[4-(1,2-benzisothiazol-3-yl)-1-piperazinyl]butyl]hexahydro-, cis- [CAS]	129273-38-7 150915-41-6	CA 2167004	Neuroleptic	Schizophrenia
<b>Perphenazine</b>		<b>58-39-9</b>			
<b>Petroleum Benzin</b>		<b>8030-30-6</b>			
PH-10			US 6331286	Antipsoriasis	Psoriasis
<b>Phanquinone</b>		<b>84-12-8</b>			
Pharmaprojects No. 4994			WO 9638482	Immunological	Unspecified
Pharmaprojects No. 5325			WO 9703986	Neuroleptic	Schizophrenia
Pharmaprojects No. 5972			WO 0204426	Antiasthma	Asthma
Pharmaprojects No. 6362			US 6057346	Antiviral, anti-HIV	Infection, HIV/AIDS
Pharmaprojects No. 6446	(R)-N-[4-[2-[[2-Hydroxy-2-(3-pyridinyl)ethyl]amino]ethyl]phenyl]-4-[4-(trifluoromethyl)phenyl]thiazol-2-yl]benzenesulfonamide			Anorectic/Antiobesity	Obesity
Pharmaprojects No. 6590			WO 0206223	Psychostimulant	Attention deficit disorder
Pharmaprojects No. 6656			US 6455026	Genomics-based drug discovery	Cancer, brain
Pharmaprojects No. 6691			US 6299900	Formulation, other	Pain, general
Pharmaprojects No. 6743	3-(6-Aminopyridin-3-yl)-N-methyl-N-[(1-methyl-1H-indol-2-yl)methyl]acrylamide			Antibacterial, other	Infection, general



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Pharmaprojects No. 6748	1,2,3,4,10,14b-Hexahydro-6-methoxy-2-methylidibenzoc[c,f]pyrazino[1,2-a]azepin				
Phenacaine		620-99-5		Antidepressant	Depression, general
Phenacetide		63-98-9			
Phenacetin		62-44-2			
Phenadoxone		467-84-5			
Phenallymal		115-43-5			
Phenamet		3819-34-9			
Phenazocine		127-35-5			
Phenazopyridine		136-40-3			
Phenbutamide		3149-00-6			
Phencyclidine		77-10-1			
Phendimetrazine		634-03-7			
Pheneizine		51-71-8			
Phenesterine		3546-10-9			
Phenetharbital		357-67-5			
Phenethicillin		132-93-4			
Pheneturide		90-49-3			
Phenformin		114-86-3			
Phenglutarimide		1156-05-4			
Phenindamine		82-88-2			
Phenindione		83-12-5			
Pheniprazine		55-52-7			
Pheniramine		86-21-5			
Phenmetrazine		134-49-6			
Phenobarbital		50-06-6			
Phenobutiodil		554-24-5			
Phenocoll		103-97-9			
Phenoctide		78-05-7			
Phenolphthalein		77-09-8			
Phenolphthalol		81-92-5			

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Phenolsulfonphthalein		143-74-8			
Phenoltetrachlorophthal		639-44-1			
ein					
Phenoperidine		562-26-5			
Phenosulfazole		515-54-8			
Phenoxybenzamine		59-96-1			
Phenoxypropazine		3818-37-9			
Phenprobamate	Pyrrolo(2,3-b)indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, phenylcarbamate (ester), (3aS-cis)- [CAS]	673-31-4		Cognition enhancer	Alzheimer's disease
Phenprocoumon		435-97-2			
		101246-66-6			
phenserine		86-34-0			
Phensuximide		122-09-8			
Phentermine		18265-54-8			
Phentetiothalein					
	Phenol, 3-(((4,5-dihydro-1H-imidazol-2-yl)methyl)(4-methylphenyl)amino)-, monomethanesulfonate (salt) [CAS]	65-28-1		Formulation, oral, other	Impotence
phen tolamine		50-60-2			
Phenyl Acetylsalicylate		134-55-4			
Phenyl Aminosalicylate		133-11-9			
Phenyl Salicylate		118-55-8			
Phenylbutazone		50-33-9			
Phenylephrine	Benzenemethanol, Alpha-(1-aminoethyl)-, (R*,S*)-(+/-)- [CAS]	61-76-7		Anorectic/Antiobesity, formulation, optimized, microparticles	
Phenylethanamine		7568-93-6			
Phenylmercury		102-98-7			
Phenylmethylbarbituric		76-94-8			
Acid					
phenylpropanolamine		14838-15-4			
Phenylpropylmethylaniline		93-88-9			

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Phenyltoloxamine	2,4-Imidazolidinedione, 5,5-diphenyl-[CAS]	92-12-6		Formulation, oral, other	Epilepsy, general
Phenylamidol		553-69-5			
phenytoin		57-41-0			
Phethenylate		510-34-9			
Phloroglucinol		108-73-6			
Pholcodine		509-67-1			
Pholedrine		370-14-9			
Phosphocreatine		67-07-2			
Phosphocysteamine		5746-40-7			
Phosphorylcholine		107-73-3			
Phthalylsulfacetamide		131-69-1			
Phthalylsulfathiazole		85-73-4			
p-Hydroxyephedrine		365-26-4			
Phylloquinone		84-80-0			
Physostigmine		57-47-6			
Phytic Acid		83-86-3			
PI-88	D-Mannose, O-6-O-phosphono-Alpha-D-mannopyranosyl-(1-3)-O-Alpha-D-mannopyranosyl-(1-3)-O-Alpha-D-mannopyranosyl-(1-3)-O-Alpha-D-mannopyranosyl-(1-2)-hydrogen sulphate [CAS]	185077-23-0	WO 9318036	Anticancer, other	Cancer, melanoma
Piberaline		39640-15-8			
piboserod	2H-(1,3)Oxazino(3,2-a)indole-10-carboxamide, N-((1-butyl-4-piperidinyl)methyl)-3,4-dihydro- [CAS]	152811-62-6			
Picilorex		62510-56-9		Antiarrhythmic	Fibrillation, atrial
Picloxydine		5636-92-0			
Picoperine		21755-66-8			
Picosulfate		10040-45-6			
Picotamide		32828-81-2			
Picumast		39577-19-0			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
pidotimod	4-Thiazolidinecarboxylic acid, 3-[(5-oxo-2-pyrrolidinyl)carbonyl]- [CAS]	121808-62-6	EP 276752	Immunomodulator, anti-infective	Infection, respiratory tract, lower
<b>Pifarnine</b>		56208-01-6			
piketopufen	Benzeneacetamide, 3-benzoyl-Alpha-methyl-N-(4-methyl-2-pyridinyl)- [CAS]	60576-13-8	GB 1436502	Anti-inflammatory, topical	
<b>Pildralazine</b>		64000-73-3			
pilocarpine	2(3H)-Furanone, 3-ethylidihydro-4-[(1-methyl-1H-imidazol-5-yl)methyl]-, (3S-cis)- [CAS]	92-13-7		Formulation, implant, Stomatological	
	2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with 2-propenoic acid, compd. with (3S-cis)-3-ethylidihydro-4-[(1-methyl-1H-imidazol-5-yl)methyl]-2(3H)-furanone [CAS]				
Piloplex	1H-Pyrrolizine-7a(5H)-acetamide, N-(2,6-dimethylphenyl)tetrahydro-, monohydrochloride [CAS]	62783-28-2	DE 2636559	Formulation, mucosal, topical	Glaucoma
pilsicainide		88069-49-2			
		88069-67-4	US 4564624	Antiarrhythmic	Arrhythmia, general
<b>Pimeclone</b>		534-84-9			
	15,19-Epoxy-3H-pyrido(2,1-c)(1,4)oxaazacyclotricosine-1,7,20,21(4H,23H)-trione, 3-(2-(4-chloro-3-methoxycyclohexyl)-1-methylethenyl)-8-ethyl-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26a-hexadecahydro-5,19-dihydroxy-14,16-dimethoxy-4,10,12,18-tetramethyl-(3S-(3R*E(1S*,3S*,4R*)), 4S*,5R*,8S*,9E*,12R*,14R*,5S*,16R*,18S,8,19S*,26aR*)))- [CAS]				
pimecrolimus		137071-32-0	EP 626385	Antipruritic/inflamm, allergic	Eczema, atopic
<b>Pimefylline</b>		10001-43-1			
	Acetic acid, [2-[octahydro-5-hydroxy-6-(3-hydroxy-5-methyl-1-nonenyl)-2-pentalenyl]ethoxy]-, methyl ester, [2R-[2Alpha,3Alpha,4Alpha(1E,3S*,5S*),5B,6aAlpha]]- [CAS]				
pimilprost		139403-31-9		Dermatological	Ulcer, general
<b>Piminodine</b>		13495-09-5			
<b>Pimobendan</b>		74150-27-9			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
pimozide	2H-Benzimidazol-2-one, 1-[1-[4,4-bis(4-fluorophenyl)butyl]-4-piperidinyl]-1,3-dihydro- [CAS]	2062-78-4	FR M3695	Neuroleptic	
<b>Pinacidil</b>		85371-64-8			
	Morpholinium, 4-[(2-bromo-4,5-dimethoxyphenyl)methyl]-4-[2-(6,6-dimethylbicyclo[3.1.1]hept-2-yl)ethoxy]ethyl]-, [CAS]	53251-94-8 59995-65-2	EP 406743	Antispasmodic	Irritable bowel syndrome
pinazepam	2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-5-phenyl-1-(2-propynyl)-[CAS]	52463-83-9	DE 2339790	Anxiolytic	
<b>Pindolol</b>		13523-86-9			
	2,4-Thiazolidinedione, 5-[[4-[2-(5-ethyl-2-pyridinyl)ethoxy]phenyl]methyl]-, monohydrochloride (+/-)- [CAS]	111025-46-8 112529-15-4	EP 193256	Antidiabetic	Diabetes, Type II
pioglitazone		1110-80-1			
<b>Pipacycline</b>		84-04-8			
<b>Pipamazine</b>		1893-33-0			
<b>Pipamperone</b>		2167-85-3			
<b>Pipazethate</b>		27315-91-9			
<b>Pipebuzone</b>		52212-02-9			
<b>Pipecurium</b>					
	Piperazinium, 4,4'-[(2β,3Alpha,5Alpha,16β,17β)-3,17-bis(acetyloxy)androstane-2,16-diy]bis[1,1]-dimethyl-, [CAS]	52212-02-9 68399-57-5	GB 1398050	Muscle relaxant	Anaesthesia, adjunct
pipecuronium	Pyrido[2,3-d]pyrimidine-6-carboxylic acid, 8-ethyl-5,8-dihydro-5-oxo-2-(1-piperazinyl)- [CAS]				
		51940-44-4	GB 1451911	Antibacterial, other	Infection, urinary tract
<b>Pipemidic acid</b>		125-51-9			
<b>Pipenzolate Bromide</b>		3819-00-9			
<b>Piperacetazine</b>					
	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[[[(4-ethyl-2,3-dioxo-1-piperazinyl)carbonyl]amino]phenylacetyl]amino]-3,3-dimethyl-7-oxo-, [2S-[2Alpha,5Alpha,6β(S*)]]- [CAS]	59703-84-3 61477-96-1	GB 1508062	Penicillin, injectable	Infection, general
piperacillin					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Piperazine Adipate		142-88-1	WO 002544	Dermatological	Vitiligo
Piperidione		77-03-2			
Piperidolate		82-98-4			
Piperilate		4546-39-8			
piperine analogues					
Piperocaine		136-82-3			
Piperonal		120-57-0			
Piperoxan		59-39-2			
Piperylone	Hexadecanoic acid, 2-[1-[3-[2-[(dimethylamino)sulfonyl]-10H-phenothiazin-10-yl]propyl]-4-piperidinyl]ethyl ester [CAS]	25 31-4-6	US 4782077	Neuroleptic	
Pipobroman		54-91-1			
Piposulfan		2608-24-4			
		37517-26-3			
pipotiazine		39860-99-6			
Pipoxolan		18174-58-8			
Pipradrol		467-60-7			
		17243-64-0	US 3971794	GI inflammatory/bowel disorders	Motility dysfunction, GI, general
pirozolin	Acetic acid, [3-ethyl-4-oxo-5-(1-piperidinyl)-2-thiazolidinylidene]-, ethyl ester [CAS]	7491-74-9			
Piracetam	5,12-Naphthacenedione, 10-[[3-amino-2,3,6-trideoxy-4-O-(tetrahydro-2H-pyran-2-yl)-Alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, [8S-[8Alpha,10Alpha(S*)]]- [CAS]				
		72496-41-4		Anticancer, antibiotic	Cancer, breast
pirarubicin		71002-09-0			
Pirazolac		38029-10-6			
		38677-81-5			
pirbuterol		65652-44-0			
Pirenoxine	2,6-Pyridinedimethanol, Alpha6-[[[(1,1-dimethylethyl)amino]methyl]-3-hydroxy-, monoacetate (salt) [CAS]	1043-21-6	US 3786160	Antiasthma	Asthma



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pirenzepine	6H-Pyrido[2,3-b][1,4]benzodiazepin-6-one, 5,11-dihydro-11-[(4-methyl-1-piperazinyl)acetyl]- [CAS]	28797-61-7 29868-97-1	FR 1505795	Antitumor	
piretanide	Benzoic acid, 3-(aminosulfonyl)-4-phenoxy-5-(1-pyrrolidinyl)- [CAS]	55837-27-9	US 4010273	Antihypertensive, diuretic	Hypertension, general
pirfenidone	2(1H)-Pyridinone, 5-methyl-1-phenyl- [CAS]	53179-13-8		Respiratory	Fibrosis, pulmonary
piribedil	Pyrimidine, 2-[4-(1,3-benzodioxol-5-ylmethyl)-1-piperazinyl]- [CAS]	3605-01-4	US 3299067	Vasodilator, peripheral	Parkinson's disease
<b>Piridocaine</b>		87-21-8			
<b>Pirifibrate</b>		55285-45-5			
<b>Piritramide</b>		302-41-0			
<b>Piritrexim</b>		72732-56-0			
pinindole	1H-Pyrazino[3,2,1-jk]carbazole, 2,3,3a,4,5,6-hexahydro-8-methyl- [CAS]	16154-78-2 60762-57-4	SU 276060	Antidepressant	Depression, general
pirmenol	(2-Pyridinemethanol, Alpha-[3-(2,6-dimethyl-1-piperidinyl)propyl]-.Alpha.phenyl-, cis-(+)- [CAS]	61477-94-9 68252-19-7	US 4112103	Antiarrhythmic	Tachycardia, supraventricular
<b>Piroctone</b>		50650-76-5			
<b>Piroheptine</b>		16378-21-5			
<b>Piromidic Acid</b>		19562-30-2			
piroxicam	2H-1,2-Benzothiazine-3-carboxamide, 4-hydroxy-2-methyl-N-2-pyridinyl-, 1,1-dioxide [CAS]	36322-90-4	US 3862319	Anti-inflammatory	
piroxicam betadex	$\beta$ -Cyclodextrin, compd. with 4-hydroxy-2-methyl-N-2-pyridinyl-2H-1,2-benzothiazine-3-carboxamide 1,1-dioxide- [CAS]	121696-62-6 96684-39-8	EP 153998	Formulation, other	Pain, musculoskeletal
piroxicam cinnamate	2-Propenoic acid, 3-phenyl-, 2-methyl-3-[(2-pyridinylamino)carbonyl]-2H-1,2-benzothiazin-4-yl ester, S,S-dioxide [CAS]	87234-24-0 54110-25-7 31793-07-4	EP 79639	Antiarthritic, other	Inflammation, general
<b>Pirozadil</b>					
<b>Pirprofen</b>					

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pitavastatin	6-Heptenoic acid, 7-(2-cyclopropyl-4-(4-fluorophenyl)-3-quinolinyl)-3,5-dihydroxy-, calcium salt (2:1), [S-(R*,S*-(E))]- [CAS]	147526-32-7	EP 304063	Hypolipaeamic/Antiatherosclerosis	Hyperlipidaemia, general
pivagabine	N-trimethylacetyl-4-aminobutyric acid	69542-93-4		Neurological	Anxiety, general
pivaloyloxymethyl	Butanoic acid, (2,2-dimethyl-1-oxopropoxy)methyl ester [CAS]	122110-53-6	EP 302349	Anticancer, other	Cancer, lung, non-small cell
<b>Pivalylbenzhydrazine</b>		306-19-4			
<b>Pivampicillin</b>		33817-20-8			
pivampicillin/pivmecillinam		98445-47-7		Penicillin, oral	Infection, general
<b>Pivcefalexin</b>		63836-75-9			
pivmecillinam	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[[[(hexahydro-1H-azepin-1-yl)methylene]amino]-3,3-dimethyl-7-oxo-, (2,2-dimethyl-1-oxopropoxy)methyl ester, [2S-(2Alpha,5Alpha,6S)]- [CAS]	32886-97-8	GB 1293590	Penicillin, oral	Infection, general
pixantrone	Benz[g]isoquinoline-5,10-dione, 6,9-bis[(2-aminoethyl)amino]-, (2Z)-2-butenedioate(1:2) [CAS]	144675-97-8	EP 503537	Anticancer, other	Cancer, lymphoma, non-Hodgkin's
pizotifen	4-(9,10-dihydro-4H-benzo[4,5]cyclohepta[1,2-b]thien-4-ylidene)-1-methylpiperidine	15574-96-6	DE 2346747	Antimigraine	
<b>Pizotyline</b>		15574-96-6			
PKI-166	Phenol, 4-(4-(((1R)-1-phenylethyl)amino)-1H-pyrrolo[2,3-d]pyrimidin-6-yl))- [CAS]	187724-61-4		Anticancer, other	Cancer, general
<b>p-Lactophenetide</b>		539-08-2			
<b>Plafibrilide</b>		63394-05-8			
plasminogen activator	Plasminogen activator [CAS]	105913-11-9	EP 151996	Fibrinolytic	Infarction, myocardial
<b>Plasmocid</b>		551-01-9			
<b>Platonin</b>		3571-88-8			
<b>Plaunotol</b>		64218-02-6			
PLD-118	Cyclopentanecarboxylic acid, 2-amino-4-methylene-, (1R,2S)- [CAS]	198022-65-0	EP 805145	Antifungal	Infection, Candida, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
PLD-147	(OC-6-43)-Bis(acetato)(1-adamantylamine)amine-dichloro-platinum (IV)			Anticancer, alkylating	Cancer, general
pleconaril	1,2,4-Oxadiazole, 3-(3,5-dimethyl-4-(3-(3-methyl-5-isoxazolyl)propoxy)phenyl)-5-(trifluoromethyl)- [CAS]	153168-05-9	US 5464848	Antiviral, other	Infection, respiratory tract, general
Plicamycin		18378-89-7			
p-Methyldiphenhydramine		19804-27-4			
PMS-601			WO 0001677	Antiviral, anti-HIV	Infection, HIV/AIDS
Pneumococcal Vaccine, Diphtheria Conjugate					
Pneumococcal Vaccine, Polyvalent					
PNU-288034	N-[[[(5s)-3[4[(1,1-dioxido-4-thiomorpholinyl)3,5-difluorophenyl]-2-oxo-5-oxazolidinyl]methyl]acetamide]			Antibiotic, other	Infection, general
Podophyllotoxin		518-28-5			
polaprezinc	Zinc, bis(N-β-alanyl-L-histidinato-N3, OAlpha)-, (T-4)- [CAS]	107667-60-7	EP 303380	Antiulcer	Ulcer, duodenal
Poldine Methylsulfate		545-80-2			
Policresulen		9011-2-3			
Polidexide		9064-92-0			
polidocanol	Polyethylene glycol monododecyl ether	3055-99-0		Vasoprotective, systemic	Venous insufficiency
		9002-92-0			
Poliovirus Vaccine Inactivated					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
poly-ADPRT inhibitors			WO 9845253	Anticancer, other	Cancer, general
<b>Polyestradiol Phosphate</b>		28014-46-2			
Polyphenon E	Polyphenon E [CAS]	188265-33-0		Antiviral, other	Infection, human papilloma virus
<b>Polythiazide</b>		346-18-9			
porfimer	Photofrin [CAS]	87806-31-3	US 4882234	Anticancer, other	Cancer, lung, non-small cell
<b>Porfiromycin</b>		801-52-5			
posaconazole	D-threo-Pentitol, 2,5-anhydro-1,3,4-trideoxy-2-C-(2,4-difluorophenyl)-4-((4-(4-(1(1S,2S)-1-ethyl-2-hydroxypropyl)-1,5-dihydro-5-oxo-4H-1,2,4-triazol-4-yl)phenyl)-1-piperazinyl)phenoxy)methyl)-1-(1H-1,2,4-triazol-1-yl)- [CAS]	171228-49-2	US 5714490	Antifungal	Infection, fungal, general
<b>Posatiirelin</b>		78664-73-0			
potassium chloride	Potassium chloride (KCl) [CAS]	7447-40-7		Formulation, oral, enteric-coated	
<b>Potassium Gluconate</b>		299-27-4			
<b>Potassium</b>		1321-14-8			
<b>Guaiacolsulfonate</b>		138-84-1			
<b>Potassium p-Aminobenzoate</b>		7722-64-7			
<b>Potassium Permanganate</b>		9003-39-8			
<b>Povidone</b>		25655-41-8			
<b>Povidone-Iodine</b>		62756-44-9	DE 2633028	Formulation, oral, other	Unspecified
PP-117	3-Pyridinemethanol, hydrofluoride [CAS]				
PR-2699	(-)-(E)-[4-(2,4-dichlorophenyl)-1,3-dithiolan-2-ylidene]-1-imidazolylacetone nitrile			Antifungal	Infection, fungal, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
PR-608	(S)-(-)-1-[4,4-bis(4-fluorophenyl)butyl]-4-(2-hydroxy-3-phenylaminopropyl)piperazine trihydrochloride			Antiparkinsonian	Parkinson's disease
<b>Practolol</b>		6673-35-4			
<b>Praimaline</b>		35080-11-6			
<b>Pralidoxime</b>		51-15-0			
	6H-Pyridazino(1,2-a)(1,2)diazepine-1-carboxamide, N-((2R,3S)-2-ethoxytetrahydro-5-oxo-3-furanyl)octahydro-9-((1-isoquinolinylcarbonyl)amino)-6,10-dioxo-, (1S,9S)- [CAS]	192755-52-5		Antiarthritic, immunological	Arthritis, rheumatoid
pralnacasan					
	2,6-Benzothiazolediamine, 4,5,6,7-tetrahydro-N6-propyl-, (S)- [CAS]	104632-26-0	EP 186087	Antiparkinsonian	Parkinson's disease
pramipexole		68497-62-1			
	1-Pyrrolidineacetamide, N-[2-[bis(1-methylethyl)amino]ethyl]-2-oxo-, monohydrochloride [CAS]	72869-16-0			
pramiracetam		75733-50-5	US 4145347	Cognition enhancer	Amnesia
<b>Pramiverin</b>		14334-40-8			
	1,2-Dithia-5,8,11,14,17-pentaazacycloicosane, cyclic peptide deriv. [CAS]				
pramlintide		151126-32-8	US 5124314	Antidiabetic	Diabetes, Type I
<b>Pramoxine</b>		140-65-8			
	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, methyl 3-phenyl-2-propenyl ester, (E)- [CAS]				
pranidipine		99522-79-9	EP 173126	Antihypertensive, other	Hypertension, general
<b>Pranlukast</b>		103177-37-3			
	5H-[1]Benzopyrano[2,3-b]pyridine-7-acetic acid, Alpha-methyl- [CAS]				
pranoprofen		52549-17-4		Formulation, mucosal, topical	Ocular disorder, general
	Androst-5-en-17-one, 3-hydroxy-, (3S)- [CAS]			Labour inducer	
prasterone		53-43-0			
	4(3H)-Cycloheptimidazolone, 5,6,7,8-tetrahydro-2-propyl-3-[2'-(1H-tetrazol-5-yl)]1,1'-biphenyl]-4-yl[methyl]- [CAS]				
prazosin		153804-05-8	US 5409947	Antihypertensive, renin system	Hypertension, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
pravastatin	1-Naphthaleneheptanoic acid, 1,2,6,7,8,8a-hexahydro- $\beta$ ,delta,6-trihydroxy-2-methyl-8-(2-methyl-1-oxobutoxy)-, monosodium salt, [1S-[1 $\alpha$ ]( $\beta$ S*,deltaS*),2 $\alpha$ ],6 $\alpha$ ],8 $\beta$ (R*,8 $\alpha$ )]- [CAS]	81093-37-0 81131-70-6	US 4346227	Hypolipaeamic/Antiatherosclerosis	Atherosclerosis
Prazepam	4H-Pyrazino[2,1-a]isoquinolin-4-one, 2-(cyclohexylcarbonyl)-1,2,3,6,7,11b-hexahydro- [CAS]	29555-38-6			
praziquantel		55268-74-1	US 4001411	Schistosomicide	
prazosin	Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(2-furanylcarbonyl)-[CAS]	19216-56-9 19237-84-4	US 4092315	Antihypertensive, adrenergic	Hypertension, general
Prednicarbate		73771-04-7			
prednimustine	Pregna-1,4-diene-3,20-dione, 21-[4-[bis(2-chloroethyl)amino]phenyl]-1-oxobutoxy]-11,17-dihydroxy-, (11 $\beta$ )- [CAS]	29069-24-7	GB 1272841	Anticancer, alkylating	
Prednisolone		50-24-8			
Prednisolone 21-Diethylaminoacetate		5626-34-6			
prednisolone farnesil	Pregna-1,4-diene-3,20-dione, 11,17-dihydroxy-21-[(3,7,11-trimethyl-1-oxo-2,6,10-dodecatrienyl)oxy]-, [11 $\beta$ ,21(2E,6E)]- [CAS]	118244-44-3	EP 332143	Antiarthritic, other	Arthritis, rheumatoid
Prednisolone Sodium Phosphate		125-02-0			
Prednisone		53-03-2			
Prednival		15180-00-4			
Prednylidene		599-33-7			
pregabalin	Hexanoic acid, 3-(aminomethyl)-5-methyl, (S)- [CAS]	148553-50-8		Antiepileptic	Epilepsy, general
Pregnan-3 $\alpha$ -ol-20-one	Estra-4,9-dien-3-one, 17-(2-hydroxy-1-oxopropyl)-17-methyl-, [17 $\beta$ (S)]- [CAS]	128-20-1			
Premarin + trimegestone		74513-62-5		Menopausal disorders	Hormone replacement therapy



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
prenalterol	Phenol, 4-[2-hydroxy-3-[(1-methylethyl)amino]propoxy]-, hydrochloride, (S)-[CAS]	57526-81-5 61260-05-7	GB 1470039	Cardio stimulant	
<b>Prenoxdiazine</b>		982-43-4			
<b>Prenylamine</b>		390-64-7			
prezatide	Cuprate(1-), (N2-(N-glycyl-L-histidyl)-L-lysinate)(N2-(N-glycyl-L-histidyl)-L-lysinate(2-))-, hydrogen, [CAS]	130120-57-9		Vulnerary	Wound healing
<b>Pridinol</b>		511-45-5			
<b>Prifinium</b>		4630-95-9			
<b>Prilocaine</b>		721-50-6			
<b>Primaquine</b>		90-34-6			
<b>Primidone</b>		125-33-7			
<b>Prinomastat</b>		192329-42-3			
PRO-2000			US 5614599	Antiviral, anti-HIV	Infection, HIV prophylaxis
<b>Probenecid</b>		57-66-9			
<b>Probutol</b>		23288-49-5			
procalnamide	Benzamide, 4-amino-N-[2-(diethylamino)ethyl]- [CAS]	51-06-9 614-39-1		Formulation, other	Arrhythmia, general
<b>Procaine</b>		59-46-1			
<b>Procarbazine</b>		671-16-9			
procaterol	2(1H)-Quinolinone, 8-hydroxy-5-[1-hydroxy-2-[(1-methylethyl)amino]butyl]-, monohydrochloride [CAS]	59828-07-8 60443-17-6 72332-33-3	GB 1496766	Antialsthma	
prochlorperazine	10H-Phenothiazine, 2-chloro-10-[3-(4-methyl-1-piperazinyl)propyl]-, (Z)-2-butenedioate	58-38-8 84-02-6		Formulation, oral, other	Nausea and vomiting, general
procodazol	1H-Benzimidazole-2-propanoic acid [CAS]	23249-97-0	ES 407882	Anticancer, immunological	Cancer, general
<b>Procyclidine</b>		77-37-2			
<b>Procymate</b>		13931-64-1			
<b>Prodipine</b>		31314-38-2			
<b>Proflavine</b>		92-62-6			
<b>Progabide</b>		62666-20-0			

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
progesterone	Pregn-4-ene-3,20-dione [CAS]	57-83-0		Formulation, transmucosal, systemic	Amenorrhoea
proglumetacin	1H-Indole-3-acetic acid, 1-(4-chlorobenzoyl)-5-methoxy-2-methyl-, 2-(4-(3-((4-(benzoylamino)-5-(dipropylamino)-1,5-dioxopentyl)oxy)propyl)-1-piperazinyl)ethylester, (+/-)- [CAS]	57132-53-3 59209-40-4	GB 1467568	Anti-inflammatory	Inflammation, general
proglumide	Pentanoic acid, 4-(benzoylamino)-5-(dipropylamino)-5-oxo-, (+/-)- [CAS]	6620-60-6	DE 1518125	Antiulcer	Ulcer, gastric
Proheptazine		77-14-5			
Prolactin		9002-62-4			
Prolintane		493-92-5			
Prolonium		123-47-7			
Promazine		58-40-2			
Promedol		64-39-1			
Promegestone		34184-77-5			
promestriene	Estra-1,3,5(10)-triene, 17-methoxy-3-propoxy-, (17 $\beta$ )- [CAS]	39219-28-8	GB 1337198	Reproductive/gonadal, general	Acne
Promethazine		60-87-7			
Pronethalol		54-80-8			
propacetamol	Glycine, N,N-diethyl-, 4-(acetylamino)phenyl ester [CAS]	66532-85-2			
propafenone	1-Propanone, 1-[2-{2-hydroxy-3-(propylamino)propoxy]phenyl]-3-phenyl-[CAS]	66532-86-3	US 4127671	Formulation, parenteral, other	
Propagermanium		54063-53-5	GB 1307455	Antiarrhythmic	Fibrillation, ventricular
Propallylonal		12758-40-6			
Propamidine		545-93-7			
propane-1,2-diol	1,2-propanediol	104-32-5			
Propanidid		57-55-6			
Propantheline		1421-14-3			
Proparacaine		50-34-0			
Propatyl		499-67-2			
propenidazole	ethyl trans-Alpha-acetyl-1-methyl-5-nitroimidazole-2-acrylate	2921-92-8		Formulation, dermal, topical	Infection, fungal, general
		76448-31-2		Antifungal	Infection, trichomoniasis

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
propentofylline	1H-Purine-2,6-dione, 3,7-dihydro-3-methyl-1-(5-oxohexyl)-7-propyl- [CAS]	55242-55-2	GB 1470220	Neuroprotective	Ischaemia, cerebral
Propicillin		551-27-9			
Propiomazine		362-29-8			
Propionic Acid		79-09-4			
propionyl L-carnitine	1-Propanaminium, 3-carboxy-N,N,N-trimethyl-2-(1-oxopropoxy)-, chloride, (R)- [CAS]	119793-66-7 20084-19-1	GB 2008578	Vasodilator, peripheral	Peripheral vascular disease
Propiopocaine		3670-68-6			
Propiram		15686-91-6			
propiverine	2,2-diphenyl-2-(1-propoxy)acetic acid (1-methylpiperid-4-yl) ester hydrochloride	54556-98-8 60569-19-9		Urological	Incontinence
Propizepine		10321-12-7			
propofol	Phenol, 2,6-bis(1-methylethyl)- [CAS]	2078-54-8	US 4056635	Anaesthetic, injectable	Anaesthesia
Propoxycaine		550-83-4			
Propoxyphene		469-62-5			
propranolol	2-Propanol, 1-[(1-methylethyl)amino]-3-(1-naphthalenyloxy)- [CAS]	318-98-9 525-66-6		Formulation, modified-release, <=24hr	Hypertension, general
Propylhexedrine		101-40-6			
Propylidone		587-61-1			
Propylthiouracil		51-52-5			
Propyphenazone		479-92-5			
Proquazone		22760-18-5			
Proscillaridin		466-06-8			
Prostacyclin		35121-78-9			
Prostaglandin E <sub>1</sub>		745-65-3			
Prostaglandin E <sub>2</sub>		363-24-6			
Prostaglandin F <sub>2α</sub>		551-11-1			
Prosuktamine		59-58-5			
Protein C		60202-16-6			
Protheobromine		50-39-5			
Prothipendyl		303-69-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Protiofate</b>	10H-Phenothiazine-2-acetic acid, 7-methoxy-Alpha, 10-dimethyl-, (+/-)- [CAS]	58416-00-5	US	Anti-inflammatory	
<b>Protionamide</b>		14222-60-7			
protizinic acid		13799-03-6			
<b>Protoanemonin</b>		108-28-1			
<b>Protokylol</b>		136-70-9			
<b>Protoporphyrin IX</b>		553-12-8			
<b>Protriptyline</b>		438-60-8			
<b>Pro-Urokinase</b>		82657-92-9			
<b>Proxazole</b>		5696-9-3			
<b>Proxibarbal</b>		2537-29-3			
proxigermanium	Propanoic acid, 3,3'-(1,3-dioxo-1,3-digermoxanediy)bis- [CAS]	12758-40-6	FR	Antiviral, other	Infection, hepatitis-B virus
<b>Proxiphylline</b>	1H,4H-[1,3]Thiazeto[3,2-a]quinoline-3-carboxylic acid, 6-fluoro-1-methyl-7-[4-[(5-methyl-2-oxo-1,3-dioxol-4-yl)methyl]-1-piperazinyl]-4-oxo- [CAS]	603-00-9	EP	Quinolone antibacterial	Infection, respiratory tract, general
<b>Prozapine</b>		3426-8-2			
<b>Prucalopride</b>		179474-81-8			
prulifloxacin		123447-62-1			
<b>Pseudococaine</b>		478-73-9			
pseudoephedrine + triprolidine	Benzenemethanol, Alpha-[1-(methylamino)ethyl]-, hydrochloride, [S-(R*,R*)]-, mixt. with (E)-2-[1-(4-methylphenyl)-3-(1-pyrrolidinyl)-1-propenyl]pyridine monohydrochloride [CAS]	90-82-4, 8054-27-1, 345-78-8		Formulation, modified-release, other	Rhinitis, allergic, general
pseudoephedrine	Benzenemethanol, Alpha-[1-(methylamino)ethyl]-, [S-(R*,R*)]- [CAS]	520-52-5		Formulation, oral, other	Infection, respiratory tract, general
<b>Psilocybin</b>	Benzonitrile, 4-[3-(4-hydroxybutyl)-4,4-dimethyl-2,5-dioxo-1-imidazolidinyl]-2-(trifluoromethyl)- [CAS]	154992-24-2		Dermatological	Alopecia, general
PSK-3841					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
p-Sulfanilylbenzylamine		4393-19-5			
PT-141			US 6051555	Male sexual dysfunction	Impotence
Pteropterin		89-38-3			
Puromycin		53-79-2			
PX-12	1-Methylpropyl 2-mercaptoimidazolyl disulfide				
Pyrantel		15686-83-6			
Pyrazinamide		98-96-4			
Pyridinol Carbamate		1882-26-4			
Pyridostigmine Bromide		101-26-8			
Pyridoxal 5-Phosphate		54-47-7			
Pyridoxine		58-56-0			
Pyrilamine		91-84-9			
Pyrimethamine		58-14-0			
Pyrinoline		1740-22-3			
Pyrisuccideanol		33605-94-6			
Pyrithione		1121-30-8			
Pyrithyldione		77-04-3			
Pyritinol		1098-97-1			
Pyrocatechol		120-80-9			
Pyrogallol		87-66-1			
Pyronaridine		74847-35-1			
Pyrovalerone		3563-49-3			
Pyroxylin		9004-70-0			
Pyrrobutamine		91-82-7			
Pyrocaine		2210-77-7			
Pyrrolnitrin		1018-71-9			
Pyvinium Pamoate		3546-41-6		Anticancer, other	Cancer, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
quazepam	2H-1,4-Benzodiazepine-2-thione, 7-chloro-5-(2-fluorophenyl)-1,3-dihydro-1-(2,2,2-trifluoroethyl)- [CAS]	36735-22-5	US 3845039	Hypnotic/Sedative	Insomnia
Quercetin		117-39-5			
quetiapine	Ethanol, 2-[2-(4-dibenzo[b,f][1,4]thiazepin-11-yl-1-piperazinyl)ethoxy]-, (E)-2-butenedioate (2:1) (salt) [CAS]	111974-69-7 111974-72-2	EP 240228	Neuroleptic	Schizophrenia
Quinacillin		1596-63-0			
	N-(6-Chloro-2-methoxy-9-acridinyl)-N,N-diethyl-1,4-pentanediamine + 10H-Phenothiazine-10-propanamine, 2-chloro-N,N-dimethyl	83-89-6			
quinacrine				Neurological	Creutzfeldt-Jakob disease
	Sulfamide, N,N-diethyl-N'-(1,2,3,4,4a,5,10,10a-octahydro-6-hydroxy-1-propylbenzo[g]quinolin-3-yl)-, (3Alpha,4aAlpha,10aBeta) - (+/-) - [CAS]	87056-78-8 94424-50-7 97805-49-7	EP 77754	Antiprolactin	Hyperprolactinaemia
quinagolide					
	3-Isoquinolinecarboxylic acid, 2-[2-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]-1,2,3,4-tetrahydro-, [3S-[2[R*(R*),3R*]]- [CAS]	82586-55-8 85441-61-8 90243-99-5	EP 49605	Antihypertensive, renin system	Hypertension, general
quinapril					
	3-Isoquinolinecarboxylic acid, 2-[2-[(1-carboxy-3-phenylpropyl)amino]-1-oxopropyl]-1,2,3,4-tetrahydro-, [3S-[2[R*(R*),3R*]]- [CAS]	82768-85-2	EP 46953	Antihypertensive, renin system	Hypertension, general
quinaprilat					
Quinapyramine		20493-41-8			
Quinbolone		2487-63-0			
Quinestradiol		1169-79-5			
Quinestrol		152-43-2			
Quinethazone		73-49-4			
quinfamide	2-Furancarboxylic acid, 1-(dichloroacetyl)-1,2,3,4-tetrahydro-6-quinolinyl ester [CAS]	62265-68-3	US 3997542	Amoebicide	
quinidine	Cinchonan-9-ol, 6'-methoxy-, (9S)-, sulfate (1:1) (salt) [CAS]	747-45-5 56-54-2		Formulation, modified-release, other	Arrhythmia, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Quinine	cis-2,3,3a,8-tetrahydro-N,4-dimethylidibenz[c,f]isoxazolo[2,3-a]azepine-2-methanamine	130-95-0	WO 9614320 WO 0204439	Anxiolytic COPD treatment	Anxiety, general Emphysema, general
Quinocide		525-61-1			
Quinupramine		31721-17-2			
Quinupristin		120138-50-3			
R-107500	1H-Benzimidazole, 2-[[[4-(3-methoxypropoxy)-3-methyl-2-pyridinyl]methyl]sulfinyl]-, sodium salt- [CAS]	117976-89-3 117976-90-6	EP 268956	Antituberc	Ulcer, gastric
rabeprazole		112573-72-5 81110-73-8			
racecadotril		510-53-2			
Racemethorphan		82640-04-8 84449-90-1			
raloxifene	L-glutamic acid, N-[[5-[[[1,4-dihydro-2-methyl-4-oxo-6-quinazolinyl)methyl]methylamino]-2-thienyl]carbonyl]- [CAS]	112887-68-0	EP 239362	Anticancer, antimetabolite	Cancer, colorectal
ralitrexed		116649-85-5 3615-24-5			
ramatroban		87269-97-4 87333-19-5			
Ramifenazone		132907-72-3 132036-88-5			
ramipril	Cyclopenta[b]pyrrole-2-carboxylic acid, 1-[2-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]octahydro-, [2S-[1[R*(R*)],2Alpha,3aß,6aß]]-[CAS]	79022	EP 79022	Antihypertensive, renin system	Heart failure
ramosetron		Methanone, (1-methyl-1H-indol-3-yl)(4,5,6,7-tetrahydro-1H-benzimidazol-5-yl)-, monohydrochloride, (R)- [CAS]			
			381422	Antiemetic	Nausea and vomiting, general

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API Generic Name Ramot project No. 1097	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Ranimustine</b>	1,1-Ethenediamine, N-[2-[[[5- [(dimethylamino)methyl]-2- furanyl]methyl]thio]ethyl]-N'-methyl-2-nitro- [CAS]	58994-96-0	US 5730992	Dermatological	Unspecified
ranitidine	1,2,3-Propanetricarboxylic acid, 2-hydroxy- bismuth(3+) salt (1:1), compd. with N-(2- [[[5-[(dimethylamino)methyl]-2- furanyl]methyl]thio]ethyl)-N'-methyl-2-ni-1- ethenediamine (1:1)- [CAS]	66357-35-5	US 4128658	Antiulcer	Ulcer, duodenal
ranitidine bismuth citrate	1-Piperazineacetamide, N-(2,6- dimethylphenyl)-4-[2-hydroxy-3-(2- methoxyphenoxy)propyl]-, (+/-)- [CAS]	128345-62-0	EP 533281	Antiulcer	Ulcer, duodenal
ranolazine		95635-55-5 95635-56-6	EP 126449	Antianginal	Angina, general
<b>Ranpirnase</b>		133737-96-9			
<b>Rapacuronium</b>		156137-99-4			
rasagiline	1H-Inden-1-amine, 2,3-dihydro-N-2- propynyl-, (R)-, [CAS]	161735-79-1	US 5457133	Antiparkinsonian	Parkinson's disease
<b>Raubasine</b>		483-04-5			
ravuconazole	Benzonitrile, 4-[2-[(1R,2R)-2-(2,4- difluorophenyl)-2-hydroxy-1-methyl-3-(1H- 1,2,4-triazol-1-yl)propyl]-4-thiazolyl]- [CAS]	182760-06-1		Antifungal	Infection, meningitis, general
raxofelast	2-Benzofuranacetic acid, 5-(acetyloxy)-2,3- dihydro-4,6,7-trimethyl-, (+)- [CAS]	128232-14-4	US 4999350	Symptomatic antidiabetic	Nephropathy, diabetic
razoxane	2,6-Piperazinedione, 4,4'-(1-methyl-1,2- ethanediy)bis- [CAS]	21416-67-1, 21416- 87-5	GB 1234935	Anticancer, other	Cancer, general
RC-529	Tetradecanoic acid (1R)-1-(2-((2-(2-deoxy- 3-O-((3R)-1-oxo-3-((1- oxotetradecyl)oxy)tetradecyl)amino-4-O- phosphono-β-D- glucopyranosyl)oxy)ethyl)amino)-2- oxoethyl)dodecyl ester, compd. with N,N- diethylethanamine (1:1) [CAS]	216014-46-9		Immunostimulant, other	Vaccine adjunct
rebamipide	4-Quinolonepropanoic acid, Alpha-[(4- chlorobenzoyl)amino]-1,2-dihydro-2-oxo- [CAS]	90098-04-7	DE 3324034	Antiulcer	

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
rebimastat	L-Valinamide, N-(2S)-2-mercapto-1-oxo-4-(3,4,4-trimethyl-2,5-dioxo-1-imidazolidinyl)butyl)-L-leucyl-N,3-dimethyl-[CAS]	259188-38-0		Anticancer, other	Cancer, lung, non-small cell
reboxetine	Morpholine, 2-[(2-ethoxyphenoxy)phenylmethyl]-, (R*,S*)-[CAS]	71620-89-8, 98769-81-4	US 4229449	Antidepressant	Depression, general
<b>Remacemide</b>		128298-28-2			
	1-Piperidinepropanoic acid, 4-(methoxycarbonyl)-4-((1-oxopropyl)phenylamino)-methyl ester-[CAS]	132539-07-2, 132875-61-7	EP 383579	Analgesic, other	Pain, general
remifentanyl	Tricyclo[3.3.1.1 <sup>3,7</sup> ]decane-2-carboxylic acid, 2-[[[1-(7-chloro-4-quinolinyl)-5-(2,6-dimethoxyphenyl)-1H-pyrazol-3-yl]carbonyl]amino]- [CAS]	146362-70-1	EP 699438	Neuroleptic	Schizophrenia
<b>Remoxipride</b>		80125-14-0			
	Benzamide, 4-amino-N-1-azabicyclo[3.3.1]non-4-yl-5-chloro-2-methoxy- [CAS]	109872-41-5, 88721-77-1	JP 58188885	Gastroprokinetic	Irritable bowel syndrome
renzapride	Benzoic acid, 2-ethoxy-4-[2-[[3-methyl-1-[2-(1-piperidinyl)phenyl]butyl]amino]-2-oxoethyl]-, (S)- [CAS]	135062-02-1	WO 9300337	Antidiabetic	Diabetes, Type II
repaglinide	2(R)-4-Isobutylphenylpropionyl methanesulfonamide L-lysine salt		WO 0024710	Cardiovascular	Reperfusion injury
repertaxin L-lysine salt	1,2-Benzisothiazol-3(2H)-one, 2-(4-(((3,4-dihydro-2H-1-benzopyran-2-yl)methyl)amino)butyl)-, 1,1-dioxide, monohydrochloride [CAS]	144980-29-0, 144980-77-8	US 5137901	Neuroprotective	Ischaemia, cerebral
repinotan	4H-Pyran[3,2-c]quinoline-2-carboxylic acid, 5,6-dihydro-7,8-dimethyl-4,5-dioxo-, 3-methylbutyl ester [CAS]	73080-51-0	US 4298610	Antiasthma	
repirinast		3625-25-0			
<b>Reposal</b>					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
reproterol	1H-Purine-2,6-dione, 7-[3-[[2-(3,5-dihydroxyphenyl)-2-hydroxyethyl]amino]propyl]-3,7-dihydro-1,3-dimethyl- [CAS]	13055-82-8 54063-54-6	FR M5969	Antiasthma	Asthma
<b>Rescimetol</b>		73573-42-9			
<b>Rescinnamine</b>		24815-24-5			
<b>Reseripiline</b>		131-02-2			
<b>Reserpine</b>		50-55-5			
<b>Resibufofenin</b>		465-39-4			
resiquimod	1H-Imidazo(4,5-c)quinoline-1-ethanol(ethoxymethyl)-Alpha, Alpha-dimethyl- [CAS]	144875-48-9	US 5389640	Antiviral, other	Infection, hepatitis-C virus
<b>Resorcinol</b>		108-46-3			
<b>Reteplase</b>		133652-38-7			
retigabine	Carbamic acid, (2-amino-4-(((4-fluorophenyl)methyl)amino)phenyl)-, ethyl ester [CAS]	150812-12-7	DE 4200259	Antiepileptic	Epilepsy, general
retinoic acid	Retinoic acid [CAS]	302-79-4		Formulation, parenteral, other	Cancer, leukaemia, acute myelogenous
Revimid			US 6281230	Anticancer, other	Cancer, myeloma
R-flurbiprofen	[1,1'-Biphenyl]-4-acetic acid, 2-fluoro-Alpha-methyl	5104-49-4		Anticancer, other	Cancer, prostate
<i>Rho (D) Immune Globulin (Human)</i>					
Rho-Kinase inhibitors			WO 0156988	Antiasthma	Unspecified
ribavirin	1H-1,2,4-Triazole-3-carboxamide, 1-β-D-ribofuranosyl- [CAS]	36791-04-5	US 4211771	Antiviral, other	Infection, haemorrhagic fever
<b>Riboflavin</b>		146-17-8			
ribostamycin	D-Streptamine, O-2,6-diamino-2,6-dideoxy-Alpha-D-glucopyranosyl-(1-4)-O-[β-D-ribofuranosyl-(1-5)]-2-deoxy- [CAS]	25546-65-0	GB 1254883	Aminoglycoside antibiotic	Infection, general
<b>Ricinoleic Acid</b>		141-22-0			
<b>Ridogrel</b>		110140-89-1			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
rifabutin	Rifamycin XIV, 1',4-didehydro-1-deoxy-1,4-dihydro-5'-(2-methylpropyl)-1-oxo-[CAS]	72559-06-9	US 4219478	Antimycobacterial	Infection, Mycobacterium avium complex
rifalazil	Rifamycin VIII, 1',4-didehydro-1-deoxy-1,4-dihydro-3'-hydroxy-5'-[4-(2-methylpropyl)-1-piperazinyl]-1-oxo-[CAS]	129791-92-0 129791-94-2 133633-12-2	EP 366914	Antimycobacterial	Infection, tuberculosis
rifametane	Rifamycin, 3-[[[1-(diethylamino)ethylidene]hydrazono]methyl]-[CAS]	94168-98-6	EP 119571	Antimycobacterial	Infection, general
<b>Rifamide</b>		<b>2750-76-7</b>			
rifampicin + trimethoprim	Rifamycin, 3-[[[4-methyl-1-piperazinyl]imino]methyl]-, mixt. with 5-[(3,4,5-trimethoxyphenyl)methyl]-2,4-pyrimidinediamine [CAS]	61498-94-0		Formulation, fixed-dose combinations	Infection, general
<b>Rifampin</b>		<b>13292-46-1</b>			
<b>Rifamycin SV</b>		<b>6998-60-3</b>			
rifapentine	Rifamycin, 3-[[[4-cyclopentyl-1-piperazinyl]imino]methyl]-[CAS]	61379-65-5	DE 2608218	Antibiotic, other	Infection, tuberculosis
rifaximin	Epoxypentadeca[1,11,13]trienimino)benzofuro[4,5-e]pyrido[1,2-a]benzimidazole-1,15(2H)-dione, 25-(acetyloxy)-5,6,21,23-tetrahydroxy-27-methoxy-2,4,11,16,20,22,24,26-octamethyl-, [2S-(2R*,16Z,18E,20R*,22S*,23S*,24S*,25R*,26S*,27R*,28E)]	80621-81-4	GB 2079270	Antibiotic, other	Infection, GI tract
rifaximine cream	4-deoxy-4'-methylpyrido[1',2'-1,2']imidoazo[5,4-c]rifamycin SV	80621-81-4	BE 888895	Formulation, dermal, topical	Infection, dermatological
<b>Rilmazafone</b>		<b>99593-25-6</b>			
rilmendidine	2-Oxazolamine, N-(dicyclopropylmethyl)-4,5-dihydro-[CAS]	54187-04-1 54249-57-9	DE 2362754	Antihypertensive, adrenergic	Hypertension, general
riluzole	2-Benzothiazolamine, 6-(trifluoromethoxy)-[CAS]	1744-22-5	EP 50551	Neuroprotective	Amyotrophic lateral sclerosis
<b>Rimantadine</b>		<b>13392-28-4</b>			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
rimazolium	4H-Pyrido[1,2-a]pyrimidin-3-(ethoxycarbonyl)-6,7,8,9-tetrahydro-1,6-dimethyl-4-oxo-, [CAS]	28610-84-6 35615-72-6	DE 2461349	Analgesc, NSAID	
rimexolone	Androsta-1,4-dien-3-one, 11-hydroxy-16,17-dimethyl-17-(1-oxopropyl)-, (11 $\beta$ , 16 $\alpha$ ), [CAS]	49697-38-3 32953-89-2	DE 2301317	Ophthalmological	Inflammation, ocular
rimonabant	1H-Pyrazole-3-carboxamide, 5-(4-chlorophenyl)-1-(2,4-dichlorophenyl)-4-methyl-N-1-piperidinyl-, monohydrochloride [CAS]	158681-13-1 19403-92-0	US 5624941 US 3755251	Anorectic/Antiobesity Antiviral, other	Obesity
Rioprostil	1,3-Benzenediol, 2,4,6-triiodo- [CAS]	77287-05-9			
risedronate	Phosphonic acid, (1-hydroxy-2-(3-pyridinyl)ethylidene)bis-, monosodium salt	115436-72-1 105462-24-6	EP 304961	Osteoporosis treatment	Paget's disease
Risedronic Acid	4H-Pyrido[1,2-a]pyrimidin-4-one, 3-[2-[4-(6-fluoro-1,2-benzisoxazol-3-yl)-1-piperidinyl]ethyl]-6,7,8,9-tetrahydro-2-methyl-, [CAS]	106266-06-2 87051-43-2 84845-57-8	EP 196132	Neuroleptic, formulation, optimized, microencapsulate	Schizophrenia
ritanserin	Benzenemethanol, 4-hydroxy- $\alpha$ -[1-[(2-(4-hydroxyphenyl)ethyl]amino]ethyl]-, (R*, S*)-, [CAS]	23239-51-2 26652-09-5	US 3410944	Labour inhibitor	Labour, preterm
ritodrine	2,4,7,12-Tetraazatridecan-13-oic acid, 10-hydroxy-2-methyl-5-(1-methylethyl)-1-(2-(1-methylethyl)-4-thiazolyl)-3,6-dioxo-8,11-bis(phenylmethyl)-, 5-thiazolyl-methyl ester, (5S-(5R*, 8R*, 10R*, 11R*))-, [CAS]	155213-67-5 174722-31-7	WO 9414436	Antiviral, anti-HIV	Infection, HIV/AIDS
Rituximab	Carbamic acid, ethylmethyl-, 3-[1-(dimethylamino)ethyl]phenyl ester, (S)- [CAS]	123441-03-2 129101-54-8	DE 3805744	Cognition enhancer	Alzheimer's disease
rivastigmine					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
rizatriptan	1H-Indole-3-ethanamine, N,N-dimethyl-5- (1H-1,2,4-triazol-1-ylmethyl)-, [CAS]	145202-66-0 159776-67-7 144034-80-0	EP 497512	Antimigraine	Migraine
RJR-2403	3-Buten-1-amine, N-methyl-4-(3-pyridinyl)- (3E)-, (2E)-2-butenedioate (1:1) [CAS]	183288-99-5		Cognition enhancer	Alzheimer's disease
RNA Stealth Nucleosides	5-Formyluridine			Antiviral, other	Infection, hepatitis-C virus
Ro-0094889	2',3'-Di-O-acetyl-5'-vinylcytidine			Anticancer, antimetabolite	Cancer, general
Ro-61-1790	2-Pyridinesulfonamide, N-[6-(2-hydroxyethoxy)-5-(2-methoxyphenoxy)-2-[2-(1H-tetrazol-5-yl)-4-pyridinyl]-4-pyrimidinyl]-5-methyl- [CAS]	180384-56-9 53716-44-2	WO 9619459	Cardiovascular	Haemorrhage, subarachnoid
Rociverine	Pyrrolidinium, 1- [[2β,3Alpha,5Alpha,16β,17β)-17-(acetyloxy)-3-hydroxy-2-(4-morpholinyl)androstan-16-yl]-1-(2-propenyl)-, bromide- [CAS]	104855-17-6 104884-91-5 119302-91-9 143558-00-3	EP 287150	Muscle relaxant	Muscle spasm, general
rofecoxib	2(5H)-Furanone, 4-(4-(methylsulfonyl)phenyl)-3-phenyl- [CAS]	162011-90-7	US 5474995	Analgesic, NSAID	Arthritis, osteo
roflumilast	Benzamide, 3-(cyclopropylmethoxy)-N-(3,5-dichloro-4-pyridinyl)-4-(difluoromethoxy)- [CAS]	162401-32-3	WO 9501338	COPD treatment	Chronic obstructive pulmonary disease
rokitamycin	Leucomycin V, 4B-butanolate 3B-propanoate [CAS]	74014-51-0 61413-54-5 751-97-3 78113-36-7 42597-57-9	US 4242504	Macrolide antibiotic	Infection, general
Rolipram					
Rolitetracycline					
Romurtide					
Ronifibrate					
ropinirole	2H-Indol-2-one, 4-[2-(dipropylamino)ethyl]-1,3-dihydro-, monohydrochloride- [CAS]	91374-20-8 91374-21-9	EP 266033	Antiparkinsonian	Parkinson's disease

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
ropivacaine	2-Piperidinecarboxamide, N-(2,6-dimethylphenyl)-1-propyl-, (S)- [CAS]	84057-95-4 98717-15-8	EP 239710	Anaesthetic, local	Anaesthesia
<b>Roquinimex</b>		84088-42-6			
rosaprostol	Cyclopentaneheptanoic acid, 2-hexyl-5-hydroxy- [CAS]	56695-65-9	GB 1523355	Prostaglandin	
<b>Rosaramicin</b>		35834-26-5			
<b>Rose Bengal</b>		632-68-8			
rosiglitazone	2,4-Thiazolidinedione, 5-((4-(2-(methyl-2-pyridinylamino)ethoxy)phenyl)methyl)-, (Z)-2-butenedioate (1:1) [CAS]	122320-73-4 155141-29-0	US 5002953	Antidiabetic	Diabetes, Type II
roxoxacin	3-Quinolincarboxylic acid, 1-ethyl-1,4-dihydro-4-oxo-7-(4-pyridinyl)- [CAS]	40034-42-2	US 3753993	Quinolone antibacterial	Infection, gonorrhoea
rostaporfin	Tin, dichloro[ethyl 3,4,20,21-tetrahydro-4,9,14,19-tetraethyl-18,19-dihydro-3,8,13,18-tetramethyl-20-phorbinecarboxylato(2-)-kappaN23,kappaN24,kappaN25,kappaN26]-, (OC-6-13)- [CAS]	114494-17-6		Ophthalmological	Macular degeneration
rosuvastatin	6-Heptenoic acid, 7-(4-(4-fluorophenyl)-6-(1-methylethyl)-2-(methyl(methylsulfonyl)amino)-5-pyrimidinyl)-3,5-dihydroxy- (S-(R*, S*-(E))) [CAS]	147098-20-2	JP 2648897	Hypolipaeamic/Antiatherosclerosis	Hyperlipidaemia, general
rotigotine	1-Naphthalenol, 5,6,7,8-tetrahydro-6-[propyl[2-(2-thienyl)ethyl]amino]-, (S)- [CAS]	99755-59-6 92071-51-7 121-19-7	US 4564628	Antiparkinsonian	Parkinson's disease
<b>Rotraxate</b>					
<b>Roxarsone</b>					
roxatidine	Acetamide, 2-(acetyloxy)-N-[3-(1-piperidinylmethyl)phenoxy]propyl]-, [CAS]	78628-28-1 93793-83-0	EP 24510	Antilulcer	Ulcer, gastric
roxifiban	L-Alanine, 3-(((3-(4-(aminoininomethyl)phenyl)-4,5-dihydro-5-isoxazolyl)acetyl)amino)-N-(butoxycarbonyl)-, methyl ester, (R)-, [CAS]	176022-59-6 112192-04-8	US 5849736	Antithrombotic	Thrombosis, general
<b>Roxindole</b>					

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
roxithromycin	Erythromycin, 9-[O-(2-methoxyethoxy)methyl]oxime [CAS]	80214-83-1 80214-86-4	EP 33255	Macrolide antibiotic	Infection, general
RPR-109881A	Benzenepropanoic acid, β-(((1,1-dimethylethoxy)carbonyl)amino)-Alpha-hydroxy- (1S,2S,4S,7R,8aR,9aS,10aR,12aS,12bR)-7,12a-bis(acetyloxy)-1-(benzoyloxy)-1,3,4,7,8,9a,10,10a,12,12a,12b-dodecahydro-2-hydroxy-5,13,13-trimethyl-8-oxo-2,6-methano-2H-cyclodeca(3,4)cyclopropa (4,5) benz (1,2-b) oxet-4-yl ester, dihydrate Alpha R, beta S [CAS]	192573-38-9		Anticancer, other	Cancer, lung, general
RPR-130401	4,9-Ethano-3aH-benz[f]isoindole-3a-carboxylic acid, 1,2,3,4,9,9a-hexahydro-2-[2-(2-methoxyphenyl)-1-oxo-2-propenyl]-9-(4-methylphenyl)-, (3aR,4S,9S,9aR)-rel- [CAS]	210282-69-2	WO 9829390 US 6316456	Anticancer, other Anticancer, other	Cancer, general Cancer, lung, non-small cell
R-roscovitine	N,N'-bis(3-hydroxyphenyl)pyridazine-3,6-diamine			Neuroprotective	Alzheimer's disease
RS-0406					
RSR-13		131179-95-8			
Rubijervine		79-58-3			
rubitecan	1H-Pyrano(3',4':6,7)indolizino(1,2-b)quinoline-3,14(4H,12H)-dione, 4-ethyl-4-hydroxy-10-nitro-, (S)- [CAS]	91421-42-0	US 6485514	Anticancer, other	Cancer, pancreatic
	9H,18H-5,21:12,17-Dimethenodibenzo(e,k)pyrrolo(3,4-h)(1,4,13)oxadiazacyclohexadecine-18,20(19H)-dione,9-(((dimethylamino)methyl)-6,7,10,11-tetrahydro-, (S)- [CAS]				
ruboxistaurin		169939-94-0		Symptomatic antidiabetic	Retinopathy, diabetic
Rufinamide		106308-44-5			

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rifaximin	7H-Pyrido[1,2,3-de]-1,4-benzothiazine-6-carboxylic acid, 9-fluoro-2,3-dihydro-10-(4-methyl-1-piperazinyl)-7-oxo- [CAS]	101363-10-4	EP 165375	Quinolone antibacterial	Infection, general
		102052-47-1			
		106017-08-7			
rupatadine	5H-Benzo[5,6]cyclohepta[1,2-b]pyridine, 8-chloro-6,11-dihydro-11-[1-[(5-methyl-3-pyridinyl)methyl]-4-piperidinylidene]-, trihydrochloride- [CAS]	156611-76-6	EP 0577957	Antiallergic, non-asthma	Rhinitis, allergic, seasonal
		153-18-4			
RWJ-54428	5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[[[(2Z)-(2-amino-5-chloro-4-thiazolyl)(hydroxyimino)acetyl]amino]-3-[[3-[[[(2-aminoethyl)thio]methyl]-4-pyridinyl]thio]-8-oxo-, (6R,7R)- [CAS]	189448-35-9	WO 9713772	Cephalosporin, injectable	Infection, beta-lactamase resistant
S-0139	Olean-12-en-28-oic acid, 27-[[3-[5-hydroxy-2-[(4-methoxy-1,4-dioxo-2-butenyl)amino]phenyl]-1-oxo-2-propenyl]oxy]-3-oxo- [CAS]	193969-54-9	WO 9727314	Cardiovascular	Ischaemia, cerebral
S-15535	Piperazine, 1-(2,3-dihydro-1,4-benzodioxin-5-yl)-4-(2,3-dihydro-1H-inden-2-yl)- [CAS]	146998-34-7		Cognition enhancer	Cognitive disorder, general
S-18886	1-Naphthalenepropanoic acid, 6-(((4-chlorophenyl)sulfonyl)amino)-5,6,7,8-tetrahydro-2-methyl [CAS]	165537-73-5		Antithrombotic	Thrombosis, general
S-34730	7-chloro-6-sulfamoyl-2-(1H)-quinoleinone-3-phosphonic acid			Neuroprotective	Unspecified
S-3578	7β-[2-(5-amino-1,2,4-thiadiazol-3-yl)-2(Z)-ethoxyiminoacetamido]-3-(1-(N-methylaminopropyl)-1H-imidazo[4,5-b]pyridinium-4-methyl-3-cephem-4-carboxylate monosulfate			Cephalosporin, injectable	Infection, general

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S-36496	2-[N-[4-(4-Chlorophenylsulfonylamino)butyl]-N-{3-[(4-isopropylthiazol-2-yl)methoxy]benzyl}sulfamoyl]benzoic acid			Antiasthma	Asthma
S-36527	2-[N-[4-(4-Chlorophenylsulfonylamino)butyl]-N-{3-[2-(4-cyclobutylthiazol-2-yl)ethyl]benzyl}sulfamoyl]benzoic acid			Antiasthma	Asthma
S-5751	(1R,2R,3S,5S)-7-[2-(5-Hydroxybenzothiophen-3-ylcarboxamido)-6,6-dimethylbicyclo[3.1.1]hept-3yl]-5(Z)-heptenoic acid			Antiallergic, non-asthma	Allergy, general
S-8510	Imidazo[4,5-d]pyrano[4,3-b]pyridine, 1,6,7,9-tetrahydro-2-(3-isoxazolyl)-, phosphate (1:1) [CAS]	151466-23-8	EP 556008	Cognition enhancer	Alzheimer's disease
S-8921	2-Naphthalenecarboxylic acid, 1-(3,4-dimethoxyphenyl)-3-(3-ethyl-1-oxopentyl)-4-hydroxy-6,7,8-trimethoxy-, methyl ester [CAS]	151165-96-7	WO 9308155	Hypolipaeamic/Antiatherosclerosis	Hypercholesterolaemia
Sabcomeline		159912-53-5			
Sabeluzole		104383-17-7			
S-Adenosylmethionine		29908-03-0			
safinamide	(S)-(+)-2-[4-(3-fluorobenzoyloxy)benzylamino]propanamide methansulfonate	133865-89-1	AU 711309	Antiepileptic	Epilepsy, general
Salacetamide		487-48-9			
Salazosulfadimidine		2315-8-4			
salbutamol	1,3-Benzenedimethanol,Alpha1-[[[(1,1-dimethylethyl)amino]methyl]-4-hydroxy-[CAS]	18559-94-9	EP 451745	Formulation, inhalable, topical, dry powder	Asthma
Salicin		138-52-3			
Salicyl Alcohol		90-01-7			

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Salicylamide	1,3-Benzenedimethanol, 4-hydroxy-Alpha1- [[[6-(4-phenylbutoxy)hexylamino]methyl]-, (±)- 1-hydroxy-2-naphthalenecarboxylate [CAS]	65-45-2	WO 9006775	Antiasthma	Asthma
Salicylamide O-Acetic Acid		25395-22-6			
Salicylanilide		87-17-2			
Salicylic Acid		69-72-7			
Salicylsulfuric Acid		89-45-2			
Salinazid		495-84-1			
salmeterol	L-Tyrosine, N2-(methylsulfonyl)-L-lysyl-1- [(2S)-3-amino-2- carboxypropyl]cyclopentanecarbonyl- [CAS]	89365-50-4 94749-08-3	EP 358398	Antihypertensive, renin system	Hypertension, general
Salsalate		552-94-3			
Salverine		6376-26-7			
Samarium <sup>153</sup> Sm		154427-83-5			
Lexidronam					
sampatrilat	4(1H)-Pteridinone, 2-amino-6-(1,2- dihydroxypropyl)-5,6,7,8-tetrahydro-, dihydrochloride, [6R-[6R*(1R*,2S*)]]- [CAS]	129981-36-8 808-26-4 110588-57-3	EP 191335	Antidepressant	Hyperphenylalaninaemia
Sancycline					
Saperconazole		69056-38-8 62989-33-7			
sapropterin	Butanediamide, N1-[3-[3-[[[(1,1- dimethylethyl)amino]carbonyl]octahydro- 2(1H)-isoquinolinyl]-2-hydroxy-1- (phenylmethyl)propyl]-2-[(2- quinolinylcarbonyl)amino]-, [3S- [2[1R*(R*),2S*],3Alpha,4aß,8aß]]- [CAS]	127779-20-8 34273-10-4	EP 432695	Antiviral, anti-HIV	Infection, HIV/AIDS
saquinavir					
Saralasin					



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saredutant	Benzamide, N-[4-[4-(acetylamino)-4-phenyl-1-piperidinyl]-2-(3,4-dichlorophenyl)butyl]-N-methyl-, (S)- [CAS]	142001-63-6	EP 474561	Antiasthma	Asthma
sarizotan	3-Pyridinemethanamine, N-((3,4-dihydro-2H-1-benzopyran-2-yl)methyl)-5-(4-fluorophenyl)- [CAS]	177975-08-5		Antiparkinsonian	Parkinson's disease
sarpogrelate	Butanedioic acid, mono[2-(dimethylamino)-1-[2-(3-methoxyphenyl)ethyl]phenoxylmethyl]ethyl ester [CAS]	125926-17-2	EP 398326	Antithrombotic	
Satigrel		111753-73-2			
satraplatin	Platinum, bis(acetato-O)amminedichloro(cyclohexanamine)-, (OC-6-43)- [CAS]	129580-63-8	EP 328274	Anticancer, alkylating	Cancer, prostate
Satumomab		144058-40-2			
SB-237376	N-[3-[[2-(3,4-dimethoxyphenyl)ethyl]amino]propyl]-4-nitrobenzamide, HCl			Antiarrhythmic	Fibrillation, atrial
SB-238039	(5-(2-phenylamino-4-pyrimidinyl)-4-(4-fluorophenyl)-1-(4-piperidinyl)imidazole			Anticancer, other	Cancer, general
SB-277011	trans-N-[4-[2-(6-Cyano-1,2,3,4-tetrahydroisoquinolin-2-yl)ethyl]cyclohexyl]-4-quinolinecarboxamide			Neuroleptic	Schizophrenia
Scarlet Red		85-83-6			
SCH-00013	Benzonitrile, 4-[2-[3,6-dihydro-4-(1,4,5,6-tetrahydro-6-oxo-3-pyridazinyl)-1(2H)-pyridinyl]-1-hydroxyethyl]- [CAS]	217963-18-3	EP 618204	Cardio stimulant	Heart failure
Sch-23863	(2-[10,11-Dihydro-5-ethoxy-5H-dibenzo[a,d] cyclohepten-S-yl]-N, N-dimethylethanamine			Immunosuppressant	Inflammation, general

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Sch-57790	1-Piperazineacetone nitrile, 4-cyclohexyl-alpha-[4-[(S)-(4-methoxyphenyl)sulfinyl]phenyl]- [CAS]	221660-80-6		Cognition enhancer	Alzheimer's disease
Sch-63390	7H-Pyrazolo[4,3-e][1,2,4]triazolo[1,5-c]pyrimidin-5-amine, 2-(2-furanyl)-7-(3-phenylpropyl)- [CAS]	174648-45-4		Antiparkinsonian	Parkinson's disease
Scillarenein		465-22-5			
Scopolamine		51-34-3			
Scopolamine N-Oxide		97-75-6			
scopolamine	Benzeneacetic acid, Alpha-(hydroxymethyl)-, 9-methyl-3-oxa-9-azatricyclo[3.3.1.0 <sup>2,4</sup> ]non-7-yl ester, [7(S)-(1Alpha,2beta,4beta,5Alpha,7beta)]- [CAS]	51-34-3	US 4262003	Formulation, transdermal, other	Nausea and vomiting, general
SCS technology			US 6046188	Antiasthma	Unspecified
secalciferol	9,10-Secocholesta-5,7,10(19)-triene-3,24,25-triol, (3beta,5Z,7E,24R)- [CAS]	55721-11-4	EP 301167	Osteoporosis treatment	Osteodystrophy
secnidazole	1H-Imidazole-1-ethanol, Alpha,2-dimethyl-5-nitro- [CAS]	3366-95-8	FR M3270	Protozoacide	Infection, trichomoniasis
Secobarbital		309-43-3			
selegiline	Benzeneethanamine, N,Alpha-dimethyl-N-2-propynyl-, (R)- [CAS]	14611-51-9	GB 1153578	Antiparkinsonian	
Selenomethionine		1464-42-2			
Sematilide		101526-83-4			
Semotiadil		116476-13-2			
seocalcitol	1,3-Cyclohexanediol, 5-((1-(6-ethyl-6-hydroxy-1-methyl-2,4-octadienyl)octahydro-7a-methyl-4H-inden-4-ylidene)ethylidene)-4-methylene-, (1R-(1Alpha(1R*,2E,4E),3abeta,4E(1R*,3S*,5Z),7aAlpha))- [CAS]	134404-52-7	WO 9100855	Anticancer, other	Cancer, liver
Sepimostat		103926-64-3			
seratrodist	Benzeneheptanoic acid, zeta-(2,4,5-trimethyl-3,6-dioxo-1,4-cyclohexadien-1-yl)-, (+/-)- [CAS]	103187-07-1 112665-43-7	EP 232089	Antiasthma	Asthma

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sertaconazole	1H-Imidazole, 1-[2-[(7-chlorobenzo[b]thien-3-yl)methoxy]-2-(2,4-dichlorophenyl)ethyl]- [CAS]	99592-32-2	EP 151477	Antifungal	Infection, dermatological
sertindole	2-Imidazolidinone, 1-[2-[4-[5-chloro-1-(4-fluorophenyl)-1H-indol-3-yl]-1-piperidinyl]ethyl]- [CAS]	106516-24-9	EP 392959	Neuroleptic	Schizophrenia
sertraline	1-Naphthalenamine, 4-(3,4-dichlorophenyl)-1,2,3,4-tetrahydro-N-methyl-, (1S-cis)- [CAS]	79559-97-0 79617-96-2 79617-97-3	EP 30081	Antidepressant	Depression, general
Setastine	2-Propen-1-amine polymer with (chloromethyl)oxirane, hydrochloride [CAS]	64294-95-7			
sevelamer	Propane, 1,1,1,3,3,3-hexafluoro-2-(fluoromethoxy)- [CAS]	152751-57-0 52757-95-6	US 5496545	Urological	Renal failure
sevoflurane	2H-1,4-Benzothiazine-2-acetic acid, 3,4-dihydro-3-oxo-4-((4,5,7-trifluoro-2-benzothiazolyl)methyl)- [CAS]	28523-86-6	DE 1954268	Anaesthetic, inhalation	Anaesthesia
SG-210	Cyclobutanemethanamine, 1-(4-chlorophenyl)-N,N-dimethyl-Alpha-(2-methylpropyl)- [CAS]	143162-65-6		Symptomatic antidiabetic	Neuropathy, diabetic
sibutramine	(4aS-(4aAlpha,6aAlpha,11bAlpha,13aR*,13bAlpha))-1,2,3,4,4a,5,6a,11b,13b-decahydro-4,4,6a,9-tetramethyl-13H-benzo[a]furo[2,3,4-mn]xanthen-11-ol	106650-56-0 84485-00-7	GB 2098602	Anorectic/Antiobesity	Obesity
siccanin	Piperazine, 1-((3-(4,7-dihydro-1-methyl-7-oxo-3-propyl-1H-pyrazolo(4,3-d)pyrimidin-5-yl)-4-ethoxyphenyl)sulfonyl)-4-methyl, 2-hydroxy-1,2,3-propanetricarboxylate- (1:1) [CAS]	22733-60-4	JP 37003548	Antifungal	
sildenafil	1H-Indole-7-carboxamide, 2,3-dihydro-1-(3-hydroxypropyl)-5-[(2R)-2-[2-[2-(2,2,2-trifluoroethoxy)phenoxy]ethyl]amino]propyl]- [CAS]	171599-83-0 139755-83-2	WO 9428902	Male sexual dysfunction	Impotence
silodosin		160970-54-7	EP 600675	Urological	Dysuria
Silver Lactate		128-00-7			

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<b>Silver Picrate</b>	N'-2-pyrimidinylsulfanilamide monosilver salt	146-84-9		Anti-infective, other	Infection, general
silver sulfadiazine		22199-08-2			
<b>Simetride</b>		68-35-9			
<b>Simfibrate</b>		154-82-5			
	Butanoic acid, 2,2-dimethyl-, 1,2,3,7,8,8a-hexahydro-3,7-dimethyl-8-[2-(tetrahydro-4-hydroxy-6-oxo-2H-pyran-2-yl)ethyl]-1-naphthalenyl ester, [1S-naphthalenyl ester, [1S-[1Alpha,3Alpha,7beta,8beta(2S*,4S*),8aB]]-[CAS]	14929-11-4	US	Hypolipaeamic/Antiatherosclerosis	Hyperlipidaemia, general
simvastatin		79902-63-9			
<b>Sincalide</b>		25126-32-3			
<b>Sintropium Bromide</b>		79467-19-9			
<b>Sisomicin</b>	3-Quinolonecarboxylic acid, 7-(7-amino-5-azaspiro[2.4]hept-5-yl)-8-chloro-6-fluoro-1-(2-fluorocyclopropyl)-1,4-dihydro-4-oxo-, [1R-[1Alpha(S*),2Alpha]]-, hydrate	32385-11-8	EP	Quinolone antibacterial	Infection, general
sitafloxacin		127254-12-0			
sitamaquine		5330-29-0		Protozoacide	Infection, leishmaniasis
		57695-04-2			
sitaxsentan	N-(4-Chloro-3-methyl-5-isoxazolyl)-2-[[4,5-(methylenedioxy)-o-tolyl]acetyl]-3-thiophenesulfonamide	184036-34-8	US	Antihypertensive, other	Hypertension, pulmonary
sivelestat		127373-66-4	EP	Respiratory	Systemic inflammatory response syndrome
SJA-6017	Butanamide, 2-[[[(4-fluorophenyl)sulfonyl]amino]-N-[(1S)-1-formyl-3-methylbutyl.]-3-methyl-, (2S)-[CAS]	190274-53-4	EP	Ophthalmological	Cataract
SL-65-1498	6-Fluoro-9-methyl-2-phenyl-4-pyrrolidin-1-ylcarbonyl)-2,9-dihydro-1H-pyrido[3,4-b]indole-1-one		EP	Anxiolytic	Anxiety, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
SLV-306	(3S,2R)-3-[1-[2'-(Ethoxycarbonyl)-4'-phenyl-butyl]-cyclopentan-1-carbonylamino]-2,3,4,5-tetra-hydro-2-oxo-1H-benzapin-1-acetic acid			Antihypertensive, diuretic	Hypertension, general
SLV-308	2-(3H)-Benzoxazolone, 7-(4-methyl-1-piperazinyl)-, monohydrochloride	269718-83-4		Antiparkinsonian	Parkinson's disease
Sm153 leixidronam	Samarate(5-)-153Sm, (((1,2-ethanediylbis(nitriobis(methylene)))tetraakis(phosphonato))(8-)-N,N',OP,OP',OP'',OP'''), pentasodium, (OC-6-21)- [CAS]	160369-78-8		Analgesic, other	Pain, cancer
S-MethyImethionine		4727-40-6			
SMP-300	N-(Aminoiminomethyl)-11-chloro-5,6,7,8-tetrahydro-8-oxo-4H-pyrrolo[3,2,1-kl][1]benzazocine-2-carboxamide monomethanesulfonate monohydrate			Antianginal	Angina, general
SN-38	(4S)-4,7,11-triethyl-3,4,12,14-tetrahydro-4,10-dihydroxy-3,14-dioxo-1H-pyrano[3',4':6,7]indolizino[1,2-b]quindin-9-yl	100286-90-6		Formulation, optimized, liposomes	Cancer, colorectal
SNAP-7941	((+)-methyl (4S)-3-(((3-{4-[3-(acetylamino)phenyl]-1-(piperidinyl)propyl)amino] carbonyl}-4-(3,4-difluorophenyl)-6-(methoxymethyl)-2-oxo-1,2,3,4-tetrahydro-5-pyrimidinecarboxylate hydrochloride)			Anxiolytic	Anxiety, general
SOA-132	2-Naphthalenecarboxamide, N-[2-[4-(diphenylmethoxy)-1-piperidinyl]ethyl]-3-hydroxy-5-(3-pyridinylmethoxy)- [CAS]	143964-80-1		Formulation, inhalable, topical	Asthma

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
soblidotin	L-valinamide, N,N-dimethyl-L-valyl-N-[2-methoxy-4-[2-[1-methoxy-2-methyl-3-oxo-3-[(2-phenylethyl)amino]propyl]-1-pyrrolidinyl]-1-(2-methylpropyl)-4-oxobutyl]-N-methyl-, [2S-[1[1R*(R*),2S*,2R*(1S*,2S*)]]- [CAS]	149606-27-9	WO 9303054	Anticancer, other	Cancer, lung, non-small cell
Sobrerol		498-71-5			
sobuzoxane	Carbonic acid, 1,2-ethanediylbis[(2,6-dioxo-4,1-piperazinediyl)methylene]bis(2-methylpropyl) ester [CAS]	98631-95-9	EP 140327	Anticancer, other	Cancer, lymphoma, T-cell
Sodium Arsanilate		127-85-5			
Sodium Arsphenamine		1936-28-3			
Sodium Chloride					
Sodium Dibunate		14992-59-7			
Sodium Folate		6484-89-5			
Sodium Formaldehydesulfoxylate		149-44-0			
Sodium Glycerophosphate		1334-74-3			
Sodium Hyaluronate					
Sodium Iodomethamate		519-26-6			
Sodium Nitrite		7632-00-0			
Sodium Nitroprusside		14402-89-2			
sodium oxybate	Butyric acid, 4-hydroxy monosodium salt [CAS]	502-85-2		Psychostimulant	Narcolepsy
Sodium Phenolsulfonate		1300-51-2			
sodium phenylbutyrate	Butyric acid, 4-phenyl-, sodium salt- [CAS]	1716-12-7		Formulation, other	Hyperammonaemia



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
sodium phosphate	Sodium phosphate monobasic monohydrate + sodium phosphate dibasic anhydrous		US 6162464	Formulation, oral, other	Surgery adjunct
sodium prasterone sulfate	3 $\beta$ -hydroxy-5-androsten-17-one(sodium sulfate dihydrate)		EP 380036	Formulation, mucosal, topical	Labour, induction
<b>Sodium Propionate</b>		137-40-6			
sodium salicylate	Benzoic acid, 2-hydroxy-, monosodium salt [CAS]	54-21-7		Formulation, oral, solubility-enhanced	Pain, general
<b>Sodium Tetradecyl Sulfate</b>		139-88-8			
sofalcone	Acetic acid, [5-[(3-methyl-2-butenyl)oxy]-2-[3-[4-[(3-methyl-2-butenyl)oxy]phenyl]-1-oxo-2-propenyl]phenoxy]- [CAS]	64506-49-6	GB 1523241	Antitumor	
<b>Solasulfone</b>		133-65-3			
solifenacin	Butanedioic acid compd with (1S)-(3R)-1-azabicyclo(2.2.2)oct-3-yl 3,4-dihydro-1-phenyl-2(1H)-isoquinolinecarboxylate (1:1) [CAS]	242478-38-2		Urological	Overactive bladder
Sorbinic acid	D-Glucitol, hexa-3-pyridinecarboxylate [CAS]	6184-06-1	BE 883352	Hypolipemic/Antiatherosclerosis	
<b>Sorbitol</b>		50-70-4			
<b>Sorivudine</b>		77181-69-2			
sotalol	Methanesulfonamide, N-[4-[1-hydroxy-2-[(1-methylethyl)amino]ethyl]phenyl]- [CAS]	3930-20-9 959-24-0		Antiarrhythmic	
<b>Soterenol</b>		13642-52-9			
<b>Sozoiodolic Acid</b>		554-71-2			
sparglumic acid	L-Glutamic acid, N-(N-acetyl-L-Alpha-aspartyl)- [CAS]	3106-85-2 80619-64-3		Formulation, mucosal, topical	Conjunctivitis
sparfloxacin	3-Quinolonecarboxylic acid, 5-amino-1-cyclopropyl-7-(3,5-dimethyl-1-piperazinyl)-6,8-difluoro-1,4-dihydro-4-oxo-, cis- [CAS]	110871-86-8	EP 221463	Quinolone antibacterial	Infection, respiratory tract, general
<b>Sparteine</b>		90-39-1			

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SPA-S-843	Candicin D, 18-decarboxy-40-demethyl-3,7-dideoxo-N <sup>3</sup> '-((dimethylamino)acetyl)-18-(((2-(dimethylamino)ethyl)amino)carbonyl)-3,7-dihydroxy-N47-methyl-5-oxo cyclic 15,19-hemiacetal, comp with L-ascorbic acid (1:2) [CAS]	202748-83-2	US 5298495	Antifungal	Infection, fungal, general
Spasmolytol	2(1H)-Pyrimidinone, 4-amino-1-(2-(hydroxymethyl)-1,3-oxathiolan-4-yl- (2R-cis)-	25333-96-4			
SPD-754	4-[3-(4-Oxo-4,5,6,7-tetrahydroindol-yl)propylamino]benzoic acid ethyl ester	160707-69-7	US 6228860	Antiviral, anti-HIV	Infection, HIV/AIDS
Spectinomycin		1695-77-8			
SPI-339					
Spiperone		749-02-0		Cognition enhancer	Alzheimer's disease
spirapril	1,4-Dithia-7-azaspiro[4.4]nonane-8-carboxylic acid, 7-[2-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]-, [8S-[7(R*(R*),8R*)]- [CAS]	83647-97-6	EP 50800	Antihypertensive, renin system	Hypertension, general
Spirogermanium	Pregn-4-ene-21-carboxylic acid, 7-(acetylthio)-17-hydroxy-3-oxo-, Gamma-lactone, (7Alpha,17Alpha)- [CAS]	41992-23-8			
spironolactone		52-01-7	EP 124147	Formulation, dermal, topical	Acne
SR-121463	Benzamide, N-(1,1-dimethylethyl)-4-[[cis-5'-ethoxy-4-[2-(4-morpholinyl)ethoxy]-2'-oxospiro[cyclohexane-1,3'-[3H]indol]-1'(2'H)-yl]sulfonyl]-3-methoxy- [CAS]	185913-78-4	WO 9715556	Cardio stimulant	Heart failure
SR-144190	Morpholine, 4-benzoyl-2-(3,4-difluorophenyl)-2-[2-[4-[[[(dimethylamino)carbonyl]amino]-4-phenyl-1-piperidinyl]ethyl]-, (2R)- [CAS]	201152-86-5	WO 9623787	Anxiolytic	Anxiety, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
SR-146131	1H-Indole-1-acetic acid, 2-[[[4-(4-chloro-2,5-dimethoxyphenyl)-5-(2-cyclohexylethyl)-2-thiazolyl]amino]carbonyl]-5,7-dimethyl- [CAS]	221671-61-0	WO 9915525	Anorectic/Antiobesity	Obesity
SR-271425	N-[1-[2-(diethylamino)ethylamino]-7-methoxy-9-oxo-9H-thioxanthen-4-yl]methyl]formamide			Anticancer, alkylating	Cancer, general
SR-27897	1H-Indole-1-acetic acid, 2-[[[4-(2-chlorophenyl)-2-thiazolyl]amino]carbonyl]- [CAS]	136381-85-6	EP 432040	Anticancer, other	Cancer, pancreatic
SR-31747	Cyclohexanamine, N-(3-(3-chloro-4-cyclohexylphenyl)-2-propenyl)-N-ethyl-, hydrochloride, (Z)- [CAS]	132173-07-0	EP 376850	Anticancer, other	Cancer, myeloma
SR-58611	Acetic acid, [[(7S)-7-[[[(2R)-2-(3-chlorophenyl)-2-hydroxyethyl]amino]-5,6,7,8-tetrahydro-2-naphthalenyl]oxy]-ethyl ester, hydrochloride [CAS]	121524-09-2	EP 303546	GI inflammatory/bowel disorders	Irritable bowel syndrome
SS732	(R)-(-)-2-(2,4-difluorophenyl)-1-(ethylsulfonyl)-1,1-difluoro-3-(1H-1,2,4-triazol-1-yl)-2-propanol		US 5385900	Formulation, mucosal, topical	Infection, ocular
SS-750	Propanamide, N, N'(dithiodi-2,1-ethanediy)bis(3-amino)- [CAS]		US 6083968	Antifungal	Infection, fungal, general
β-aletine	(2S,4R)-1-[5-chloro-1-[(2,4-dimethoxyphenyl)sulfonyl]-3-(2-methoxyphenyl)-2-oxo-2,3-dihydro-1H-indol-3-yl]-4-hydroxy-N,N-dimethyl-2-pyrrolidine carboxamide	646-08-2		Anticancer, immunological	Cancer, myeloma
SSR-149415	2-(7-chloro-5-methyl-4-oxo-3-phenyl-4,5-dihydro-3H-pyridazinol[4,5-b]indol-1-yl)-N,N-dimethylacetamide		WO 0155130	Antidepressant	Depression, general
SSR-180575				Neuroprotective	Unspecified

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
SSR-181507	(3-Exo)-8-benzoyl-N-[[[(2S)-7-chloro-2,3-dihydro-1,4-benzodioxin-2-yl]methyl]-8-azabicyclo[3.2.1]octane-3-methanamine HCl		US 6221879	Neuroleptic	Schizophrenia
SSR-591813	(5aS,8S,10aR)-5a,6,9,10-tetrahydro,7H,11H-8,10a-methanopyrido[2',3':5,6]pyrano[2,3-d]azepine			Dependence treatment	Addiction, nicotine
SST-101	D-Glucitol, 1,4:3,6-dianhydro-, dinitrate [CAS]	87-33-2		Formulation, transdermal, other	Angina, general
SSY-726	(-)-(R)-3-Methyl-3-(methylsulfonyl)-1-(1,2,4-triazol-1-yl)-2-[4-(trifluoromethyl)phenyl]-2-butanol		US 5147886	Antifungal	Infection, fungal, general
ST-200	1-Propanaminium, 2-(acetyloxy)-3-carboxy-, N,N,N-trimethyl-, chloride, (R)- [CAS]	5080-50-2	DE 3015635	Cognition enhancer	Dementia, senile, general
stachyflin			WO 9711947	Antiviral, other	Infection, influenza virus
Stallimycin		636-47-5			
Stampidine			US 6350736	Antiviral, anti-HIV	Infection, HIV/AIDS
Stannous		15578-26-4			
Pyrophosphate	(OC-6-13)-Dihydrogen dichloro[7,12-diethyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropionate(4-)-N21,N22,N23,N24]stannate(2-)			Hepatoprotective	Hyperbilirubinaemia
stannsporfin		106344-20-1			
Stanolone		521-18-6			
Stanozolol		10418-03-8 (2'H form); 302-96-5 (1'H form)			
Staph aureus ther			US 6376652	Genomics-based drug discovery	Infection, MRSA
STAT4 inhibitors			WO 9629341	Immunosuppressant	Unspecified

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
stavudine	Thymidine, 2',3'-dideoxy-3'-deoxy- [CAS]	3056-17-5	EP 501511	Antiviral, anti-HIV	Infection, HIV/AIDS
<b>Stenbolone</b>		5197-58-0			
stepronin	Glycine, N-[1-oxo-2-[(2-thienylcarbonyl)thio]propyl]- [CAS]	72324-18-6	US 4242354	Antitussive	Cough
<b>Stibocaptate</b>		27279-76-1			
<b>Stibophen</b>		15489-16-4			
<b>Stilbamidine</b>		122-06-5			
stiripentol	1-Penten-3-ol, 1-(1,3-benzodioxol-5-yl)-4,4-dimethyl- [CAS]	49763-96-4		Antiepileptic	Epilepsy, general
<b>Streptodornase</b>		37340-82-2			
<b>Streptomycin</b>		57-92-1			
<b>Streptonicozid</b>		5667-71-0			
<b>Streptonigrin</b>		3930-19-6			
<b>Streptozocin</b>		18883-66-4			
	3-Thiopheneacetic acid, 5-[bis(carboxymethyl)amino]-2-carboxy-4-cyano-, strontium salt (1:2)- [CAS]	135459-87-9	EP 415850	Osteoporosis treatment	Osteoporosis
strontium ranelate	Strontium chloride (89SrCl <sub>2</sub> ) [CAS]	38270-90-5		Analgesic, other	Pain, cancer
<b>Succimer</b>		304-55-2			
<b>Succinimide</b>		123-56-8			
<b>Succinylcholine</b>		55-94-7			
<b>Succinylcholine</b>		71-27-2			
<b>Succinylsulfathiazole</b>		116-43-8			
<b>Succisulfone</b>		5934-14-5			
<b>Suclofenide</b>		30279-49-3			
	Aluminium, hexadeca-μ-hydroxytetraacosahydroxy(μ <sub>8</sub> -(1,3,4,6-tetra-O-sulfo-β-D-fructofuranosyl-Alpha-D-glucopyranoside tetrakis(hydrogen sulfato)(8-)))hexadeca- [CAS]	54182-58-0	JP 58208233	Antiulcer, Formulation, oral, other	Ulcer, general
sucralfate	Propanamide, N-[4-(methoxymethyl)-1-[2-(2-thienyl)ethyl]-4-piperidinyl]-N-phenyl-[CAS]				
sufentanil		56030-54-7	US 3998834	Analgesic, other, formulation implant	Pain, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
sulbactam	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-, 4,4-dioxide, (2S-cis)- [CAS]	68373-14-8	GB 2000138	Antibiotic, other	Infection, general
sulbactam + ampicillin		117060-71-6	US 4234579	Antibiotic, other	Infection, general
	4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-[(phenylsulfoacetyl)amino]-, [2S-[2Alpha,5Alpha,6S(S*)]]- [CAS]	28002-18-8 41744-40-5	GB 1289358	Penicillin, injectable	Infection, pseudomonal
Sulbentine		350-12-9			
	Propanoic acid, 2-methyl-, dithiobis[3-[1-[[[(4-amino-2-methyl-5-pyrimidinyl)methyl]formylamino]ethylidene]-3,1-propanediyl] ester [CAS]	3286-46-2 67-16-3		Neurological	Unspecified
subutiamine					
	1H-Imidazole, 1-[2-[[[(4-chlorophenyl)methyl]thio]-2-(2,4-dichlorophenyl)ethyl]-, (+/-)- [CAS]	61318-90-9 61318-91-0	US 4055652	Antifungal	Infection, fungal, general
sulconazole		167747-19-5			
Sulesomab		127-71-9			
Sulfabenzamide		144-80-9			
Sulfacetamide		80-32-0			
Sulfachlorpyridazine		485-41-6			
Sulfachrysoidine		17784-12-2			
Sulfacytine		68-35-9			
Sulfadiazine		115-68-4			
Sulfadiazamide		122-11-2			
Sulfadimethoxine		2447-57-6			
Sulfadoxine		94-19-9			
Sulfaethidole		57-67-0			
Sulfaguanidine		27031-08-9			
Sulfaguanole		152-47-6			
Sulfalene		14376-16-0			
Sulfaloxic Acid		127-79-7			
Sulfamerazine		651-06-9			
Sulfamer		57-68-1			
Sulfamethazine					



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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Sulfamethizole	Benzoic acid, 2-hydroxy-5-[[4-[(2-pyridinylamino)sulfonyl]phenyl]azo]- [CAS]	144-82-1		Formulation, oral, enteric-coated	Arthritis, rheumatoid
Sulfamethomidine		3772-76-7			
Sulfamethoxazole		723-46-6			
Sulfamethoxypyridazine		80-35-3			
Sulfametrole		32909-92-5			
Sulfamidochrysoidine		103-12-8			
Sulfamoxole		729-99-7			
Sulfanilamide		63-74-1			
Sulfanilic Acid		121-57-3			
Sulfanilylurea		547-44-4			
Sulfaperine		599-88-2			
Sulfaphenazole		526-08-9			
Sulfaproxyline		116-42-7			
Sulfapyrazine		116-44-9			
Sulfapyridine		144-83-2			
Sulfarside		1134-98-1			
Sulfarsphenamine		618-82-6			
sulfasalazine		599-79-1			
Sulfasomizole		632-00-8			
Sulfasymazine		1984-94-7			
Sulfathiazole		72-14-0			
Sulfathiourea		515-49-1			
Sulfinalol		66264-77-5			
Sulfinpyrazone		57-96-5			
Sulfiram		95-05-6			
Sulfisomidine		515-64-0			
Sulfisoxazole		127-69-5			
Sulfobromophthalein		71-67-0			
Sulfonethylmethane		76-20-0			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Sulfoniazide	cis-5-fluoro-2-methyl-1-[(p-methylsulfinyl)benzylidene]indene-3-acetic acid	3691-81-4	US 3725548	Anti-inflammatory	Inflammation, general
Sulfonmethane		115-24-2			
Sulforidazine		14759-06-9			
Sulfoxone		144-75-2			
sulindac		38194-50-2			
Sulisatin		54935-03-4		Alimentary/Metabolic, other	
Sulisobenzone		4065-45-6			
Sulmarin		29334-07-4			
Sulmazole		73384-60-8			
Suloctidil		54063-56-8			
Sulphan Blue		129-17-9	US 4024179	Prostaglandin	Abortion
sulpiride		15676-16-1			
sulprostone		60325-46-4			
sultamicillin		117060-71-6 76497-13-7			
Sulthiame		61-56-3	GB 2044255	Penicillin, oral	Infection, general
sultopride	Benzamide, N-[(1-ethyl-2-pyrrolidinyl)methyl]-5-(ethylsulfonyl)-2-methoxy-[CAS]	53583-79-2	FR M5916	Neuroleptic	Psychosis, general
Sultosilic Acid		57775-26-5			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
sumanirole	4H-Imidazo[4,5,1-ij]quinolin-2(1H)-one, 5,6-dihydro-5-(methylamino)-, (5R)-, (2Z)-2-butenedioate (1:1) [CAS]	179386-44-8	WO 9514020	Antiparkinsonian	Parkinson's disease
sumatriptan	1H-Indole-5-methanesulfonamide, 3-[2-(dimethylamino)ethyl]-N-methyl-, butanedioate (1:1)- [CAS]	103628-46-2 103628-48-4	EP 147107	Antimigraine	Migraine
SUN-N8075	1-(4-amino-2,3,5-trimethylphenoxy)-3-[4-{4-(4-fluorobenzyl)phenyl}piperazin-1-yl]propan-2(s)-ol dimethanesulfonate			Neuroprotective	Infarction, cerebral
suplatast	Sulfonium, [3-[[4-(3-ethoxy-2-hydroxypropoxy)phenyl]amino]-3-oxopropyl]dimethyl-, [CAS]	94055-76-2	JP 59167564	Antiasthma	Asthma
Suprofen		40828-46-4			
Suramin		129-46-4			
surfactant TA	Beractant [CAS]	108778-82-1	WO 9117766	Lung Surfactant	Respiratory distress syndrome, general
Suriclone		53813-83-5			
Suxibuzone		27470-51-5	US 5830998	Antiepileptic Analgesic, other	Epilepsy, general Pain, general
SYM-1010					
SYM-2081	L-Glutamic acid, 4-methyl-, (4R)- [CAS]	31137-74-3			
SYM-2207	4-(Aminophenyl)-1-methyl-6,7-(methylenedioxy)-N-butyl-1,2-dihydrophthalazine-2-carboxamide			Neuroprotective	Ischaemia, cerebral
Symclosene		87-90-1			
Syn-1253	1-cyclopropyl-6-fluoro-8-methoxy-7-[3-(4-methyl-1,2,3-triazol-1-yl)pyrrolidin-1-yl]-4-oxo-1,4-dihydroquinoline 3-carboxylic acid			Quinolone antibacterial	Infection, peritoneum
Syn-2190	1-Azetidinesulfonic acid, 3-[[{(2E)-[(1,4-dihydro-1,5-dihydroxy-4-oxo-2-pyridinyl)methoxy]imino)-2-thienylacetyl]amino]-2-methyl-4-oxo-, (2S,3S)- [CAS]	214963-75-4	WO 9847895	Antibacterial, other	Infection, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Syn-2869	3H-1,2,4-Triazol-3-one, 4-(4-(4-((1R,2R)-2-(2,4-difluorophenyl)-2-hydroxy-1-methyl-3-(1H-1,2,4-triazol-1-yl)propyl)-1-piperazinyl)phenyl)-2,4-dihydro-2((4-(trifluoromethoxy)phenyl)methyl)- [CAS]	210562-98-4	US 6153616	Antifungal	Infection, Aspergillus
Synephrine		94-07-5			
Syrosingopine		84-36-6			
T-1095	1-Propanone, 3-(5-benzofuranyl)-1-(2-hydroxy-6-((6-O-methoxycarbonyl)-β-D-glucopyranosyl)oxy)-4-methylphenyl- [CAS]	209746-59-8	EP 850948	Antidiabetic	Diabetes, general
	L-Phenylalaninamide, N-acetyl-L-tryptophyl-L-glutaminy-L-Alpha-glutamyl-L-tryptophyl-L-Alpha-glutamyl-L-glutaminy-L-lysyl-L-isoleucyl-L-threonyl-L-alanyl-L-leucyl-L-leucyl-L-Alpha-glutamyl-L-glutaminy-L-alanyl-L-glutaminy-L-glutaminy-L-isoleucyl-L-glutaminy-L-glutaminy-L-Alpha-glutamyl-L-lysyl-L-Alpha-glutamyl-asparaginy-L-tyrosyl-L-Alpha-glutamyl-L-leucyl-L-glutaminy-L-lysyl-L-leucyl-L-Alpha-aspartyl-L-lysyl-L-tryptophyl-L-ananyl-L-seryl-L-leucyl-L-tryptophyl-L-Alpha-glutamyl-L-tryptophyl- [CAS]	251562-00-2	WO 9959615	Antiviral, anti-HIV	Infection, HIV/AIDS
T-1249	1-cyclopropyl-8-methyl-7-[5-methyl-6-(methylamino)-3-pyridinyl]-4-oxo-1,4-dihydro-3-quinolinecarboxylic acid			Quinolone antibacterial	Infection, dermatological
T-3912	Benzo(b)thiophene-5-methanol, Alpha-((2-(diethylamino)ethoxy)methyl)-, hydrochloride, (R)- [CAS]	142935-03-3	EP 565965	Cognition enhancer	Alzheimer's disease
T-588	Benzenesulfonamide, 2,3,4,5,6-pentafluoro-N-(3-fluoro-4-methoxyphenyl)- [CAS]	195533-53-0		Anticancer, other	Cancer, liver
T-67			US 5190951	Cognition enhancer	Alzheimer's disease
T-82					

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
TA-2005	2-(1H)-Quinolinone, 8-hydroxy-5-[1-hydroxy-2-[[2-(4-methoxyphenyl)-1-methylethyl]amino]ethyl]-, monohydrochloride, [R-(R*,R*)]- [CAS]	137888-11-0	US 4579854	Antiasthma	Asthma
TA-2005	2-(1H)-Quinolinone, 8-hydroxy-5-[1-hydroxy-2-[[2-(4-methoxyphenyl)-1-methylethyl]amino]ethyl]-, monohydrochloride, [R-(R*,R*)]- [CAS]		WO 189480	Formulation, inhalable, solution	Asthma
TA-993	1,5-Benzothiazepin-4(5H)-one, 3-(acetyloxy)-5-[2-(dimethylamino)ethyl]-2,3-dihydro-8-methyl-2-(4-methylphenyl)-, (2R,3R)-rel-(-), (2Z)-2-butenedioate [CAS]	122024-98-0	JP 01045376	Antithrombotic	Peripheral vascular disease
tabimorelin	(R)-Alpha-[(E)-5-Amino-N,5-dimethyl-2-hexenamido]-N-methyl-N-[(R)-Alpha-(methylcarbamoyl)phenethyl]-2-naphthaleneproplionamide	170851-70-4 193079-69-5		Releasing hormones	Growth hormone deficiency
tacalcitol	9,10-Secostercholesta-5,7,10(19)-triene-1,3,24-triol, (1Alpha,3B,5Z,7E,24R)- [CAS]	57333-96-7 93129-94-3	EP 129003	Antipsoriasis	Keratosis
tacedinaline	Benzamide, 4-(acetylamino)-N-(2-aminophenyl)- [CAS]	112522-64-2 1684-40-8	DE 3613571	Anticancer, other	Cancer, pancreatic
tacrine	9-Acridinamine, 1,2,3,4-tetrahydro- [CAS]	321-64-2	EP 332147	Cognition enhancer	Alzheimer's disease
Tacrolimus		104987-11-3			
tadalafil	Pyrazino(1',2':1,6)pyrido(3,4-b)indole 1,4-dione, 6-(1,3-benzodioxol-5-yl)-2,3,6,7,12,12a-hexahydro-2-methyl-, (6R-trans) [CAS]	171596-29-5	US 6143746	Male sexual dysfunction	Impotence
tafenoquine	1,4-Pentanediamine, N4-[2,6-dimethoxy-4-methyl-5-[3-(trifluoromethyl)phenoxy]-8-quinolinyl]- [CAS]	106635-80-7 106635-81-8 80065-55-0	US 4617394	Antimalarial	Infection, malaria
tafluposide	(S)-N-[2-(1,6,7,8-Tetrahydro-2H-indeno-[5,4-b]furan-8-yl)]propionamide	179067-42-6	WO 9612727	Anticancer, other	Cancer, general
TAK-375				Hypnotic/Sedative	Insomnia

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TAK-427	2-[6-[[3-[4-(Diphenylmethoxy)-piperidino]imidazo[1,2-b]pyridazin-2-yl]-2-methylpropionic acid dihydrate			Antipruritic/inflamm, allergic	Eczema, atopic
TAK-559	(E)-4-[4-[5-Methyl-2-phenyl-1,3-oxazol-4-yl)methoxy]benzyloxyimino]-4-phenylbutyric acid			Antidiabetic	Diabetes, general
Taka-Diastase	7H-1,3-Dioxolo[4,5-h][2,3]benzodiazepine, 7-acetyl-5-(4-aminophenyl)-8,9-dihydro-8-methyl-, (8R)-[CAS]	9001-19-8			
talampanel		161832-65-1	US 5639751	Antiepileptic	Epilepsy, general
Talampicillin		47747-56-8			
talaportin	N-[[[(2S,3S)-18-Carboxy-2-(2-carboxyethyl)-13-ethyl-2,3-dihydro-3,7,12,17-tetramethyl-8-vinyl porphyrin-20-yl]acetyl]-L-aspartic acid	220201-34-3		Radio/chemosensitizer	Cancer, lung, general
Talastine		16188-61-7			
Talbutal		115-44-6			
Talinolol		57460-41-0			
talipexole	4H-Thiazolo[4,5-d]azepin-2-amine, 5,6,7,8-tetrahydro-6-(2-propenyl)- [CAS]	101626-70-4 36085-73-1	DE 3503963	Antiparkinsonian	Schizophrenia
talnetant	4-Quinolincarboxamide, 3-hydroxy-2-phenyl-N-[(1S)-1-phenylpropyl]- [CAS]	174636-32-9	WO 9532948	GI inflammatory/bowel disorders	Irritable bowel syndrome
talniflumate	3-Pyridinecarboxylic acid, 2-[3-(trifluoromethyl)phenyl]amino]-, 1,3-dihydro-3-oxo-1-isobenzofuranyl ester [CAS]	66898-62-2	BE 858864	Anti-inflammatory	Inflammation, ocular
talniflurin	L-Prolinamide, N-[(hexahydro-1-methyl-2,6-dioxo-4-pyrimidinyl)carbonyl]-L-histidyl-, (S)- [CAS]	103300-74-9	JP 61033197	Neurological	Dyskinesia, general
tamoxifen	Ethanolamine, 2-[4-(1,2-diphenyl-1-butenyl)phenoxy]-N,N-dimethyl-, (Z)-[CAS]	10540-29-1	US 4536516	Anticancer, hormonal	

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tamsulosin	Benzenesulfonamide, 5-[2-[[2-(2-ethoxyphenoxy)ethyl]amino]propyl]-2-methoxy-, (R)- [CAS]	106133-20-4 80223-99-0	EP 34432	Prostate disorders	Benign prostatic hyperplasia
tandospirone	4,7-Methano-1H-isindole-1,3(2H)-dione, hexahydro-2-[4-{4-(2-pyrimidinyl)-1-piperazinyl}butyl]-, (3aAlpha,4beta,7beta,7aAlpha)-, 2-hydroxy-1,2,3-propanetricarboxylate (1:1) [CAS]	112457-95-1 87760-53-0 9010-29-1 108945-35-3	EP 82402	Anxiolytic	Anxiety, general
Tannoform					
Taprostene	3-Quinolincarboxamide, N-[2-[[[4-[2-(3,4-dihydro-6,7-dimethoxy-2(1H)-isoquinolinyl)ethyl]phenyl]amino]carbonyl]-4,5-dimethoxyphenyl]- [CAS]	206873-63-4	WO 9817648	Radio/chemosensitizer	Cancer, lung, non-small cell
tariquidar	6-[[[2-(Dimethyl-amino)ethyl]amino]-3-hydroxy-7H-indeno[2,1-c]quinolin-7-one dihydrochloride		WO 9532187	Anticancer, other	Cancer, lung, non-small cell
TAS-103		174634-09-4			
Tasosartan		145733-36-4			
Taurocholic Acid		81-24-3			
Taurolidine		19388-87-5			
tazanolast	Acetic acid, oxo[[3-(1H-tetrazol-5-yl)phenyl]amino]-, butyl ester [CAS]	82989-25-1	US 4778816	Antiasthma	
tazarotene	3-Pyridinecarboxylic acid, 6-[(3,4-dihydro-4,4-dimethyl-2H-1-benzothioiopyran-6-yl)ethynyl]-, ethyl ester [CAS]	118292-40-3 89786-04-9	EP 284288	Antipsoriasis	Psoriasis
Tazobactam					
tazobactam + piperacillin			JP 58225091	Antibiotic, other	Infection, general
TBC-3711	N-Methyl-N-propargyl-10-aminomethyl-dibenzo(b,f)oxepin	374680-51-0		Cardiovascular	Heart failure
TCH-346	5-Hexenoic acid, 4-hydroxy-, polymer with 4-ethenyl-1H-imidazole [CAS]			Neuroprotective	Amyotrophic lateral sclerosis
tebipenem		82200-24-6		Beta-lactam antibiotic	Infection, streptococcal

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
tecadenoson	Adenosine, N-[(3R)-tetrahydro-3-furanyl]- [CAS]	204512-90-3	WO 9808855	Antiarrhythmic	Tachycardia, supraventricular
tecastemizole	1H-Benzimidazol-2-amine, 1-[(4-fluorophenyl)methyl]-N-4-piperidinyl- [CAS]	75970-99-9	US 4219559	Antiallergic, non-asthma	Rhinitis, allergic, seasonal
<b>Technetium <sup>99m</sup>Tc</b>		121281-41-2			
<b>Bicisate</b>		125224-05-7;			
<b>Technetium <sup>99m</sup>Tc</b>		104348-91-6			
<b>Meriatide</b>		109581-73-9			
<b>Technetium <sup>99m</sup>Tc</b>		104716-22-5			
<b>Sestamibi</b>					
<b>Technetium <sup>99m</sup>Tc</b>					
<b>Teboroxime</b>		4267-5-4			
<b>Teclothiazide</b>		5560-78-1			
<b>Teclozan</b>					
tedisamil	Spiro[cyclopentane-1,9'-[3,7]diazabicyclo[3.3.1]nonane], 3',7'-bis(cyclopropylmethyl)- [CAS]	90961-53-8	EP 102833	Antiarrhythmic	Fibrillation, atrial
<b>Teflurane</b>		124-72-1			
tegafur	2,4-(1H,3H)-Pyrimidinedione, 5-fluoro-1-(tetrahydro-2-furanyl)- [CAS]	17902-23-7	GB 1168391	Anticancer, antimetabolite	Cancer, general
	2,4-(1H,3H)-Pyrimidinedione, 5-fluoro-1-(tetrahydro-2-furanyl)-, mixt. with 2,4-(1H,3H)-pyrimidinedione- [CAS]	74578-38-4	EP 224885	Anticancer, antimetabolite	Cancer, breast
tegafur + uracil	Hydrazinecarboximidamide, 2-[(5-methoxy-1H-indol-3-yl)methylene]-N-pentyl-, (Z)-2-butenedioate [CAS]	189188-57-6 145158-71-0		GI inflammatory/bowel disorders	Irritable bowel syndrome
tegaserod		61036-64-4			
<b>Teicoplanin</b>		3424-98-4		Antiviral, other	Infection, hepatitis-B virus
telbivudine	β-L-2'-deoxythymidine	80880-90-6			
<b>Telenzepine</b>					

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telithromycin	3-De((2,6-dideoxy-3-C-methyl-3-O-methyl-Alpha-L-ribo-hexopyranosyl)oxy)-11,12-dideoxy-6-O-methyl-3-oxo-12,11-(oxycarbonyl)((4-(4-(3-pyridinyl)-1H-imidazol-1-yl)butyl)imino))- [CAS]	191114-48-4	EP 680967	Macrolide antibiotic	Infection, respiratory tract, general
telmestaine	3,4-Thiazolidinedicarboxylic acid, 3-ethyl ester, (R)- [CAS]	122946-43-4		COPD treatment	Bronchitis, chronic
telmisartan	(1,1'-Biphenyl)-2-carboxylic acid, 4'-((1,4-dimethyl-2'-propyl(2,6'-bi-1H-benzimidazol)-1'-yl)methyl)- [CAS]	144701-48-4	EP 502314	Antihypertensive, renin system	Hypertension, general
telomerase inhbs			WO 9941261	Anticancer, other	Cancer, general
temazepam	7-chloro-1,3-dihydro-3-hydroxy-1-methyl-5-phenyl-2H-1,4-benzodiazepin-2-one	846-50-4	US 3197467	Hypnotic/Sedative	Insomnia
temiverine	Benzeneacetic acid, Alpha-cyclohexyl-Alpha-hydroxy-, 4-(diethylamino)-1,1-dimethyl-2-butynyl ester, [CAS]	129927-33-9	GB 2222828	Urological	Pollakisuria
temocapril	1,4-Thiazepine-4(5H)-acetic acid, 6-[[1-(ethoxycarbonyl)-3-phenylpropyl]amino]tetrahydro-5-oxo-2-(2-thienyl)-, [2S-[2Alpha,6Omega(R*)]]- [CAS]	102090-90-4 110221-44-8 111902-57-9	US 4495188	Antihypertensive, renin system	Hypertension, general
Temocillin		66148-78-5			
temoporfin	Phenol, 3,3',3'',3'''-(2,3-dihydro-21H,23H-porphine-5,10,15,20-tetrayl)tetrakis- [CAS]	122341-38-2	EP 337601	Radio/chemosensitizer	Cancer, head and neck
temozolomide	Imidazo[5,1-d]-1,2,3,5-tetrazine-8-carboxamide, 3,4-dihydro-3-methyl-4-oxo- [CAS]	85622-93-1	DE 3231255	Anticancer, alkylating	Cancer, brain, general
tenatoprazole	1H-Imidazo(4,5-b)pyridine, 5-methoxy-2-(((4-methoxy-3,5-dimethyl-2-pyridinyl)methyl)sulfinyl)- [CAS]	113712-98-4	US 4808596	Antiulcer	Ulcer, gastric
Tenecteplase		191588-94-0			
Tenidap		120210-48-2			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
teniposide	Furo[3',4':6,7]naphtho[2,3-d]-1,3-dioxol-6(5aH)-one, 5,8,8a,9-tetrahydro-5-(4-hydroxy-3,5-dimethoxyphenyl)-9-[[4,6-O-(2-thienylmethylene)-β-D-glucopyranosyl]oxy], [5R-[5Alpha,5aβ,8aAlpha,9β(R*)]]- [CAS]	29767-20-2	US 3524844	Anticancer, other	Cancer, lymphoma, non-Hodgkin's
tenofovir	Phosphonic acid, (((1R)-2-(6-amino-9H-purin-9-yl)-1-methylethoxy)methyl)- [CAS]	147127-20-6		Antiviral, anti-HIV	Infection, HIV/AIDS
tenofovir disoproxil	2,4,6,8-tetraoxa-5-phosphanonanediolic acid, 5-(2-(6-amino-9H-purin-9-yl)-1-methylethoxymethyl) bis(1-methylethylester, 5-oxide (R)-, (E)-2-butenedioate	202138-50-9		Antiviral, anti-HIV	Infection, HIV/AIDS
Tenonitroazole	2H-Thieno[2,3-e]-1,2-thiazine-3-carboxamide, 4-hydroxy-2-methyl-N-2-pyridinyl-, 1,1-dioxide [CAS]	3810-35-3			
tenoxicam		59804-37-4	GB 1519811	Antiarthritic, other	
Tenuazonic Acid	5,9,13,17-Nonadecatetraen-2-one, 6,10,14,18-tetramethyl- [CAS]	610-88-8		Antitumor	
teprenone	Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-[(tetrahydro-2-furanyl)carbonyl]- [CAS]	3796-63-2 6809-52-5			
terazosin	1-Naphthalenemethanamine, N-(6,6-dimethyl-2-hepten-4-ynyl)-N-methyl-, (E)- [CAS]	63074-08-8 63590-64-7 70024-40-7	US 4112097	Antihypertensive, adrenergic	Hypertension, general
terbinafine	1,3-Benzenediol, 5-[2-[(1,1-dimethylethyl)amino]-1-hydroxyethyl]- [CAS]	78628-80-5 91161-71-6	EP 24587	Antifungal	Infection, dermatological
terbutaline		23031-25-6		Formulation, mucosal, topical	Dysmenorrhoea
terconazole	Piperazine, 1-[4-[2-(2,4-dichlorophenyl)-2-(1H-1,2,4-triazol-1-ylmethyl)-1,3-dioxolan-4-yl]methoxy]phenyl]-4-(1-methylethyl)-, cis- [CAS]	67915-31-5	US 4358449	Antifungal	Vaginitis

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Tetrahydrozoline		84-22-0			
Tetrandrine		518-34-3			
Tetrantoin		52094-70-9			
Tetrazepam		10379-14-3			
Tetrofosmin		127502-06-1			
tetroxoprim	2,4-Pyrimidinediamine, 5-[[3,5-dimethoxy-4-(2-methoxyethoxy)phenyl]methyl]-[CAS]	53808-87-0 74515-38-1	US 3992379	Trimethoprim and analogues	Infection, general
Tevenel®	Cytidine, 2'-deoxy-2'-(fluoromethylene)-, (2E)- [CAS]	4302-95-8			
tezacitabine		130306-02-4	US 5616702	Anticancer, antimetabolite	Cancer, colorectal
tezosentan	2-Pyridinesulfonamide, N-(6-(2-hydroxyethoxy)-5-(2-methoxyphenoxy)-2-(2-(1H-tetrazol-5-yl)-4-pyridinyl)-4-pyrimidinyl)-5-(1-methylethyl)- [CAS]	180384-57-0		Cardio stimulant	Oedema, general
thalidomide	1H-Isoindole-1,3(2H)-dione, 2-(2,6-dioxo-3-piperidinyl)- [CAS]	50-35-1		Dermatological	Infection, dermatological
Thenaldine		86-12-4			
Thenylidiamine		91-79-2			
Theobromine		83-67-0			
Theofibrate		54504-70-0			
theophylline	1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- [CAS]	58-55-9 5967-84-0		Formulation, modified-release, other	Asthma
Thiabendazole		148-79-8			
Thiacetazone		104-06-3			
thiacymserine	Carbamic acid, [4-(1-methylethyl)phenyl]-, (3aS,8aS)-3,3a,8,8a-tetrahydro-3a,8-dimethyl-2H-thieno[2,3-b]indol-5-yl ester [CAS]	145209-51-4		Cognition enhancer	Alzheimer's disease
Thialbarbital		467-36-7			
Thiamine		59-43-8			
Thiamine		154-87-0			
Thiamine		67-16-3			
Thiamiprine		5581-52-2			



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Thiamphenicol	L-Thiotyrosinyl-glycyl-glycine	15318-45-3		Anticancer, immunological	Cancer, general
Thiamylal		77-27-0			
Thiazesim		5845-26-1			
Thiazinamium		58-34-4			
Thiazolinobutazone		54749-86-9			
Thiazolsulfone		473-30-3			
Thibenzazoline		6028-35-9			
Thiethylperazine		1420-55-9			
Thimerfonate		5964-24-9			
Thimerosal		54-64-8			
Thiobarbital		77-32-7			
Thiobutabarbital		2095-57-0			
Thiocarbamizine		91-71-4			
Thiocarbarsone		120-02-5			
Thiocolchicine		2730-71-4			
Thiocresol		26445-03-4			
Thioctic Acid		62-46-4			
Thioglycerol		96-27-5			
Thioguanine		154-42-7			
Thioimreg					
Thiopental	Thiophosphonoformic acid	71-73-8		Antiviral, anti-HIV	Infection, HIV/AIDS
Thiopropazate		84-06-0			
Thiopropoperazine		316-81-4			
Thioridazine		50-52-2			
Thiothixene		5591-45-7			
Thiovir					
Thiphenamil		82-99-5			
Thiram		137-26-8			
Thonzylamine		63-56-9			
Thozalinone		655-05-0			
Thromboplastin		9035-58-9			

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<b>Thurfyl Nicotinate</b>		70-19-9	US 6245750	Anticancer, other	Cancer, colorectal
thymectacin					
<b>Thymol</b>		89-83-8			
<b>Thymopentin</b>		69558-55-0			
<b>Thymyl N-</b>		578-20-1			
<b>Isoamylcarbamate</b>					
<b>Thyropropic Acid</b>		51-26-3			
<b>Thyroxine</b>		51-48-9			
<b>Tiadenol</b>		6964-20-1			
	3-Piperidinecarboxylic acid, 1-[4,4-bis(3-methyl-2-thienyl)-3-butenyl]-, (R)- [CAS]	115103-54-3	WO 8700171	Antiepileptic	Epilepsy, general
<b>Tiamenidine</b>		31428-61-2			
	Heptanoic acid, 7-[(3-chloro-6,11-dihydro-6-methylidibenzo[c,f][1,2]thiazepin-11-yl)amino]-, S,S-dioxide [CAS]	72797-41-2 66981-73-5	GB 1269551	Antidepressant	Depression, general
tianteptine					
tiapride	Benzamide, N-[2-(diethylamino)ethyl]-2-methoxy-5-(methylsulfonyl)- [CAS]	51012-32-9	GB 1394563	Neuroleptic	
tiaprofenic acid	2-Thiopheneacetic acid, 5-benzoyl- $\alpha$ -methyl- [CAS]	33005-95-7	GB 1331505	Antiarthritic, other	
<b>Tiaramide</b>		32527-55-2			
tiazofurin	4-Thiazolecarboxamide, 2- $\beta$ -D-ribofuranosyl- [CAS]	60084-10-8	EP 54432	Anticancer, antimetabolite	Cancer, leukaemia, chronic myelogenous
<b>Tibezonium</b>		54663-47-7			
	19-Norpregn-5(10)-en-20-yn-3-one, 17-hydroxy-7-methyl-, (7 $\alpha$ ,17 $\alpha$ )-[CAS]				
tibolone		5630-53-5	EP 389035	Menopausal disorders	Hormone replacement therapy
<b>Ticarcillin</b>		34787-01-4			
	Thieno[3,2-c]pyridine, 5-[(2-chlorophenyl)methyl]-4,5,6,7-tetrahydro-[CAS]	53885-35-1 55142-85-3	GB 1554424	Antithrombotic	
ticlopidine					
<b>Ticrynafen</b>		40180-04-9			
	4-(3-hydroxy-3-phenyl-3-thien-2-yl-propyl)-4-methylmorpholinium	6252-92-2 144-12-7		Antispasmodic	
tiemonium					

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tigecycline	2-Naphthacene-carboxamide, 4,7-bis(dimethylamino)-9-[[[(1,1-dimethylethyl)amino]acetyl]amino]-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-, (4S,4aS,5aR,12aS)- [CAS]	220620-09-7	EP 582829	Tetracycline	Infection, general
<b>Tigemonam</b>		102507-71-1			
<b>Tigloidine</b>		495-83-0			
<b>Tilidine</b>		20380-58-9			
<b>Tilisolol</b>		85136-71-6			
tilmacoxil	Benzenesulfonamide, 4-(4-cyclohexyl-2-methyl-5-oxazolyl)-2-fluoro- [CAS]	180200-68-4	WO 9619463	Alimentary/Metabolic, other	Polyp
tiludronic acid	Phosphonic acid, [[(4-chlorophenyl)thio]methylene]bis- [CAS]	89987-06-4	EP 100718	Osteoporosis treatment	Paget's disease
Timentin		86482-18-0		Antibiotic, other	Infection, general
timepidium	Piperidinium, 3-(di-2-thienylmethylene)-5-methoxy-1,1-dimethyl-, [CAS]	35035-05-3	GB 1358446	Antispasmodic	
<b>Timiperone</b>		57648-21-2			
	(-)-1-(1-butylamino)-3-[(4-morpholino-1,2,5-thiadiazol-3-yl)oxy]-2-propanolmaleate (1:1) salt	26839-75-8		Antihypertensive, adrenergic, antiglaucoma	
timolol		26921-17-5	GB 1253709		
<b>Timonacic</b>		444-27-9			
<b>Tin Ethyl Etiopurpurin</b>		113471-15-1			
tinazoline	1H-Indole, 3-[(4,5-dihydro-1H-imidazol-2-yl)thio]- [CAS]	62882-99-9	US 3376311	Vasodilator, peripheral	
<b>Tinidazole</b>		19387-91-8			
<b>Tinoridine</b>		24237-54-5			
<b>Tiocarlde</b>		910-86-1			
<b>Tioclomarol</b>		22619-35-8			
tiocanazole	1H-Imidazole, 1-[2-[(2-chloro-3-thienyl)methoxy]-2-(2,4-dichlorophenyl)ethyl]-[CAS]	61675-64-7			
		65899-73-2	US 4062966	Antifungal	Infection, fungal, general
tiopronin	Glycine, N-(2-mercapto-1-oxopropyl)-[CAS]	1953-02-2	US 3246025	Urological	Homocystinuria

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
tiotropium	3-Oxa-9-azoniatricyclo(3.3.1.0 <sup>2,4</sup> )nonane, 7-((hydroxydi-2-thienylacetyl)oxy)-9,9-dimethyl-, [CAS]	136310-93-5	EP 418716	COPD treatment	Chronic obstructive pulmonary disease
<b>Tioxolone</b>		4991-65-5			
<b>Tipepidine</b>		5169-78-8			
tipifarnib	2(1H)-Quinolone, 6-(amino(4-chlorophenyl)(1-methyl-1H-imidazol-5-yl)methyl)-4-(3-chlorophenyl)-1-methyl [CAS]	192185-68-5 192185-72-1	WO 9716443	Anticancer, other	Cancer, breast
tipranavir	N-[3-{1(R)-[4-Hydroxy-2-oxo-6(R)-(2-phenylethyl)-6-propyl-5,6-dihydro-2H-pyran-3-yl]propyl}phenyl]-5-(trifluoromethyl)pyridine-2-sulfonamide	174484-41-4		Antiviral, anti-HIV	Infection, HIV/AIDS
tiquizium	2H-Quinolizinium, 3-(di-2-thienylmethylene)octahydro-5-methyl-, [CAS]	71731-58-3	US 4205074	Antispasmodic	
tiropazamine	1,2,4-Benzotriazin-3-amine, 1,4-dioxide- [CAS]	20028-80-2 27314-97-2 5424-06-6	DE 2204574	Radio/chemosensitizer	Cancer, lung, non-small cell
<b>Tiratricol</b>		51-24-1			
tirilazad	Pregna-1,4,9(11)-triene-3,20-dione, 21-[4-(2,6-di-1-pyrrolidinyl-4-pyrimidinyl)-1-piperazinyl]-16-methyl-, (16Alpha)-, [CAS]	110101-65-0 110101-67-2 110101-66-1	WO 8701706	Neuroprotective	Haemorrhage, subarachnoid
tirofiban	L-Tyrosine, N-(butylsulfonyl)-O-[4-(4-piperidinyl)butyl]-, [CAS]	142373-60-2 144494-65-5	EP 478363	Antithrombotic	Infarction, myocardial
tiropamide	Benzenepropanamide, Alpha-(benzoylamino)-4-[2-(diethylamino)ethoxy]-N,N-dipropyl-, (+)- [CAS]	55837-29-1	DE 2503992	Antispasmodic	Muscle spasm, general
<b>Titanium Sulfate</b>		13825-74-6			
tixocortol	Pregn-4-ene-3,20-dione, 21-[(2,2-dimethyl-1-oxopropyl)thio]-11,17-dihydroxy-, (11B)- [CAS]	55560-96-8 61951-99-3	GB 1475795	Antiallergic, non-asthma, mucosal, topical	Rhinitis, allergic, general

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
tizanidine	2,1,3-Benzothiadiazol-4-amine, 5-chloro-N-(4,5-dihydro-1H-imidazol-2-yl)-[CAS]	51322-75-9	GB 1429926	Muscle relaxant	Spastic paralysis
	Glycine, L-Gamma-glutamyl-S-(phenylmethyl)-L-cysteiny-2-phenyl-, diethyl ester, (2R)- [CAS]	168682-53-9	US 5679643	Immunostimulant, other	Myelodysplastic syndrome
TLK-199	Glycine, L-Gamma-glutamyl-3-[[2-((bis(2-chloroethyl)amino)phosphinyloxy)ethyl]sulfonyl]-L-alanyl-2-phenyl-, (2R)- [CAS]	158382-37-7	US 5545621	Anticancer, other	Cancer, ovarian
			RU 2035185	Anticancer, immunological	Cancer, general
TLK-286		129298-91-5			
TNF-β analogue					
TNP-470					
TO-186	Pregna-1,4-diene-3,20-dione, 9-fluoro-11β,17,21-trihydroxy-16.βeta.-methyl-, 17-butyrate 21-propionate [CAS]	5534-02-1		Antipruritic/inflamm, allergic	
tobramycin	O-3-amino-3-deoxy-Alpha-D-glucopyranosyl-(1,6)-O-(2,6-diamino-2,3,6-trideoxy-Alpha-D-ribo-hexopyranosyl-(1-4)-2-deoxy- [CAS]	32986-56-4			Infection, respiratory tract, general
	Propanamide, 2-amino-N-(2,6-dimethylphenyl)- [CAS]	41708-72-9	US 4218477	Formulation, inhalable, topical	
toainide		5634-42-4		Antiarrhythmic	Fibrillation, ventricular
Tocamphyl					
tocladesine	8-Chloroadenosine 3'5'-cyclic phosphate	41941-56-4			
Tocoretinate		40516-48-1		Anticancer, other	Cancer, colorectal
Todralazine		14679-73-3			
Tofenacin		15301-93-6			
tofimilast	5H-Pyrazolo[3,4-c]-1,2,4-triazolo[4,3-a]pyridine,9-cyclopentyl-7-ethyl-6,9-dihydro-3-(2-thienyl)-				
	5H-2,3-Benzodiazepine, 1-(3,4-dimethoxyphenyl)-5-ethyl-7,8-dimethoxy-4-methyl-[CAS]	185954-27-2		Antiasthma	Asthma
tofisopam		22345-47-7	GB 1334271	Anxiolytic	Anxiety, general
Tolazamide		1156-19-0			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Tolazoline</b>		59-98-3			
<b>Tolbutamide</b>		64-77-7			
tolcapone	Methanone, (3,4-dihydroxy-5-nitrophenyl)(4-methylphenyl)- [CAS]	134308-13-7	EP 237929	Antiparkinsonian	Parkinson's disease
tolciclate	Carbamothioic acid, methyl(3-methylphenyl)-, O-(1,2,3,4-tetrahydro-1,4-methanonaphthalen-6-yl) ester [CAS]	50838-36-3	GB 1364407	Antifungal	Infection, dermatological
<b>Tolcycclamide</b>		664-95-9			
tolevamer	Benzenesulfonic acid, 4-ethenyl-, homopolymer,	28038-50-8			
tolfenamic acid	Benzoic acid, 2-[(3-chloro-2-methylphenyl)amino]- [CAS]	13710-19-5	DE 1543295	Antibacterial, other Anti-inflammatory	Infection, Clostridium, general Inflammation, general
<b>Tolindate</b>		27877-51-6			
<b>Toliprolol</b>		2933-94-0			
<b>Tolmetin</b>		26171-23-3			
<b>Tolnaftate</b>		2398-96-1			
<b>Tolonidine</b>		4201-22-3			
<b>Tolonium</b>		92-31-9			
toloxatone	2-Oxazolidinone, 5-(hydroxymethyl)-3-(3-methylphenyl)- [CAS]	29218-27-7	GB 1250538	Antidepressant	
<b>Tolperisone</b>		728-88-1			
<b>Tolpropamine</b>		5632-44-0			
<b>Tolrestat</b>		82964-04-3			
tolserine	Carbamic acid, (2-methylphenyl)-, (3aS,8aR)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl ester [CAS]	145209-30-9		Cognition enhancer	Alzheimer's disease
tolterodine	Phenol, 2-(3-(bis(1-methylethyl)amino)-1-phenylpropyl)-4-methyl-, (R)- [CAS]	124937-51-5	EP 325571	Urological	Incontinence
tolvaptan	Benzamide, N-[4-[(7-chloro-2,3,4,5-tetrahydro-5-hydroxy-1H-1-benzazepin-1-yl)carbonyl]-3-methylphenyl]-2-methyl- [CAS]	150683-30-0	EP 450097	Cardiovascular	Heart failure

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Tolycaine	Beta-D-Fructopyranose, 2,3:4,5-bis-O-(1-methylethyldene)-, sulfamate [CAS]	3686-58-6			Epilepsy, generalized, tonic-clonic
Topiramate		97240-79-4			Cancer, general
topoisomerase inhibitors			EP 533483	Antiepileptic	
	1H-Pyranol[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione, 9-[[dimethylamino)methyl]-4-ethyl-4,10-dihydroxy-, (S)- [CAS]		US 5733880	Anticancer, other	
topotecan		123948-87-8	EP 321122	Anticancer, other	Cancer, ovarian
	3-Pyridinesulfonamide, N-[[[1-methylethyl)amino]carbonyl]-4-[(3-methylphenyl)amino]- [CAS]	56211-40-6	US 4018929	Antihypertensive, diuretic	Hypertension, general
torasemide					
	ethyl (2R,4S)-4-[[3,5-bis(trifluoromethyl)benzyl](methoxycarbonyl)amino]-2-ethyl-6-(trifluoromethyl)-3,4-dihydroquinoline-1(2H)-carboxylate	262352-17-0		Hypolipaeamic/Antiatherosclerosis	Atherosclerosis
torcetrapib					
torcitabine	β-L-2'Deoxycytidine			Antiviral, other	Infection, hepatitis-B virus
	Ethanamine, 2-[4-(4-chloro-1,2-diphenyl-1-butenyl)phenoxy]-N,N-dimethyl-, (Z)-[CAS]	89778-26-7	EP 95875	Anticancer, hormonal	Cancer, breast
toremifene		89778-27-8			
Torsemide		56211-40-6			
Tositumomab		208921-02-2			
	1,8-Naphthyridine-3-carboxylic acid, 7-(3-amino-1-pyrrolidinyl)-1-(2,4-difluorophenyl)-6-fluoro-1,4-dihydro-4-oxo-, [CAS]	100490-36-6		Quinolone antibacterial	Infection, urinary tract
tosufloxacin		115964-29-9	US 4704459		
	Cyclohexanol, 2-[(dimethylamino)methyl]-1-(3-methoxyphenyl)-, cis-(+/-)-[CAS]	27203-92-5			
tramadol		36282-47-0		Analgesic, other	Pain, general
Tramazoline		1082-57-1			
	1H-Indole-2-carboxylic acid, 1-[2-[(1-carboxy-3-phenylpropyl)amino]-1-oxopropyl]octahydro-, [2S-[1[R*(R*)],2Alpha,3aAlpha,7aβ]- [CAS]	87679-71-8			
trandolapril		37-6 52-53-9	DE 3151690	Antihypertensive, renin system	Hypertension, general

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tranexamic acid	Cyclohexanecarboxylic acid, 4-(aminomethyl)-, trans- [CAS]	1197-18-8	US 3950405	Antifibrinolytic	Menstrual disorder, general
tranilast	Benzoic acid, 2-[[3-(3,4-dimethoxyphenyl)-1-oxo-2-propenyl]amino]- [CAS]	53902-12-8	US 3940422	Vulnerary	Wound healing
trans-retinoic acid	Retinoic acid [CAS]	302-79-4		Anticancer, other	Cancer, general
Tranylcypromine		155-09-9			
trapidil	[1,2,4]Triazolo[1,5-a]pyrimidin-7-amine, N,N-diethyl-5-methyl- [CAS]	15421-84-8	DD 55956	Vasodilator, coronary	
Trastuzumab		180288-69-1			
travoprost	5-Heptenoic acid, 7-(3,5-dihydroxy-2-(3-hydroxy-4-(3-(trifluoromethyl)phenoxy)-1-butenyl)cyclopentyl)-, 1-methylethylester (1R(1Alpha(Z),2R(1E,3R*),3Alpha,5Alpha) [CAS]	157283-68-6		Formulation, mucosal, topical	Glaucoma
Traxanox		58712-69-9			
traxoprodil	1-Piperidineethanol, 4-hydroxy-Alpha-(4-hydroxyphenyl)-beta-methyl-4-phenyl-, (AlphaS,BS)- [CAS]	134234-12-1		Analgesic, other	Pain, general
	1,2,4-Triazolo[4,3-a]pyridin-3(2H)-one, 2-[3-[4-(3-chlorophenyl)-1-piperazinyl]propyl]- [CAS]	188591-67-5			
trazodone		19794-93-5	US 4215104	Antidepressant	
Tremacamra		25332-39-2			
Trenbolone		155576-45-7			
Trengestone		10161-33-8			
		5192-84-7			
treosulfan	1,2,3,4-Butanetetrol, 1,4-dimethanesulfonate, [S-(R*,R*)]- [CAS]	299-75-2	WO 8401506	Anticancer, alkylating	
trepibutone	Benzenebutanoic acid, 2,4,5-triethoxy-Gamma-oxo- [CAS]	41826-92-0	GB 1387733	Antispasmodic	
treprostamol	Prosta-5,13-dien-1-oic acid, 6,9-epoxy-11,15-dihydroxy-, [5Z,9Alpha,11Alpha,13E,15S]- [CAS]	35121-78-9		Formulation, parenteral, other	Hypertension, pulmonary
tretinoin	Retinoic acid [CAS]	61849-14-7	US 6054486	Formulation, dermal, topical	Acne
		302-79-4			

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API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
bretoquinol	6,7-isoquinolinediol, 1,2,3,4-tetrahydro-1-[(3,4,5-trimethoxyphenyl)methyl]-, (S)- [CAS]	18559-59-6 30418-38-3 21650-42-0	ZA 6802416	Antiasthma	
<b>TRH</b>		24305-27-9			
TRI-50b	TRI 50b [CAS]	226214-49-9		Antithrombotic	Thrombosis, general
<b>Triacetin</b>		102-76-1			
<b>Triamcinolone</b>		76-25-5			
<b>Acetonide</b>		31002-79-6			
<b>Triamcinolone</b>		5611-51-8			
<b>Benetonide</b>					
<b>Triamcinolone</b>					
<b>Hexacetoneide</b>					
	Pregna-1,4-diene-3,20-dione, 9-fluoro-11,21-dihydroxy-16,17-[(1-methylethylidene)bis(oxy)]-, (11 $\beta$ ,16 $\alpha$ ) [CAS]	76-25-5 124-94-7		Formulation, inhalable, topical	Asthma
triamcinolone					
<b>Triamterene</b>		396-01-0			
triapine	Triapine [CAS]	236392-56-6	US 6458816	Anticancer, antimetabolite	Cancer, leukaemia, general
<b>Triaziquone</b>		68-76-8			
triazolam	8-chloro-6-(2-chlorophenyl)-1-methyl-4H-[1,2,4]-triazolo[4,3-a][1,4]benzodiazepine	28911-01-5	US 3980790	Hypnotic/Sedative	Insomnia
<b>Tribenoside</b>		10310-32-4			
<b>Trichlorfon</b>		52-68-6			
<b>Trichlormethiazide</b>		133-67-5			
<b>Trichlormethine</b>		555-77-1			
<b>Trichloroethylene</b>		79-01-6			
<b>Triclobisonium</b>		79-90-3			
<b>Triclocarban</b>		101-20-2			
<b>Triclofenol Piperazine</b>		5714-82-9			
<b>Triclofos</b>		306-52-5			
<b>Triclosan</b>		3380-34-5			
<b>Tricromyl</b>		85-90-5			
<b>Tridihexethyl iodide</b>		125-99-5			

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trientine	1,2-Ethanediamine, N,N2-bis(2aminoethyl)-, [CAS]	38260-01-4 112-24-3		Metabolic and enzyme disorders	Wilson's disease
Triethanolamine		102-71-6			
Triethylenemelamine		51-18-3			
Triethylenephosphoramide		545-55-1			
Triethylenethiophosphoramide		52-24-4			
Trifluoperazine		117-89-5			
Trifluoperidol		749-13-3			
Triflupromazine		146-54-3			
trifluridine	Thymidine, Alpha,Alpha,Alpha-trifluoro- [CAS]	70-00-8	US 3201387	Antiviral, other	Infection, herpes virus, general
triflusal	Benzoic acid, 2-(acetyloxy)-4-(trifluoromethyl)- [CAS]	322-79-2	US 4096252	Antithrombotic	Thrombosis, general
Trihexyphenidyl		52-49-3			
	Androst-2-ene-2-carbonitrile, 4,5-epoxy-3,17-dihydroxy-, (4Alpha,5Alpha,17Beta)- [CAS]				
trilostane		13647-35-3	US 3296255	Anticancer, hormonal	Cancer, breast
Trimazosin		35795-16-5			
trimebutine	Benzoic acid, 3,4,5-trimethoxy-, 2-(dimethylamino)-2-phenylbutyl ester, (Z)-2-butenedioate (1:1) [CAS]	34140-59-5 39133-31-8	DE 2151716	Antispasmodic	
Trimecaine		616-68-2			
Trimeprazine		84-96-8			
Trimetazidine		5011-34-7			
Trimethadione		127-48-0			
Trimethaphan		68-91-7			
Trimethobenzamide		138-56-7			
Trimethoprim		738-70-5			
Trimetozine		635-41-6			
trimetrexate	2,4-Quinazolinediamine, 5-methyl-6-[[[(3,4,5-trimethoxyphenyl)amino]methyl]- [CAS]	52128-35-5 82952-64-5	US 4391809	Antifungal	Infection, Pneumocystis jiroveci

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trimipramine	5H-Dibenz[b,f]azepine-5-propanamine, 10,11-dihydro-N,N,β-trimethyl-, (Z)-2-butenedioate (1:1) [CAS]	521-78-8 739-71-9		Antidepressant	
Trimoprostil		69900-72-7			
Trioxsalen		3902-71-4			
tripamide	Benzamide, 3-(aminosulfonyl)-4-chloro-N-(octahydro-4,7-methano-2H-indol-2-yl)-, (3aAlpha,4Alpha,7Alpha,7aAlpha)- [CAS]	73803-48-2	JP 7305585	Antihypertensive, diuretic	Hypertension, general
Triparanol		78-41-1			
Tripelennamine		91-81-6			
Triprolidine		486-12-4			
triptorelin	Luteinizing hormone-releasing factor (pig), 6-D-tryptophan- [CAS]	124508-66-3 57773-63-4	US 4010125	Releasing hormones	Cancer, prostate
tritiozine	Morpholine, 4-[thioxo(3,4,5-trimethoxyphenyl)methyl]- [CAS]	35619-65-9	US 3862138	Antiulcer	
Tritoqualine		14504-73-5			
TRK-530	Phosphonic acid, [[4-(methylthio)phenyl]thio]methylene]bis-, disodium salt [CAS]	151425-92-2	WO 9410181	Antiarthritic, other	Arthritis, rheumatoid
TRK-820	2-Propenamide, N-[(5Alpha,6β)-17-(cyclopropylmethyl)-4,5-epoxy-3,14-dihydroxymorphinan-6-yl]-3-(3-furanyl)-N-methyl-, monohydrochloride, (2E)- [CAS]	152658-17-8	WO 9315081	Antipruritic/inflam, non-allergic	Pruritus
Troclosene		2244-21-5			
trofosfamide	3-2-(chloroethyl)-2-[bis(2-chloroethyl)amino]tetrahydro-2H-1,3,2-oxazaphosphorin 2-oxide	22089-22-1	GB 1188159	Anticancer, alkylating	
Troglitazone		97322-87-7			
Troleandomycin		2751-9-9			
Trolnitrate		588-42-1			
tromantadine	N-(1-adamantyl)-2-(2-dimethylamine ethoxy)acetamide	53783-83-8	DE 1941218	Antiviral, other	Infection, herpes simplex virus
Tromethamine		77-86-1			

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Tropacine	1H-Indole-3-acetic acid, 1-(4-chlorobenzoyl)-5-methoxy-2-methyl-, 2-carboxy-2-phenylethyl ester, (+/-)- [CAS]	6878-98-4	GB 2125398	Antiarthritic, other	Chemotherapy-induced nausea and vomiting
Tropesin		65189-78-8			
Tropicamide		1508-75-4			
tropine	1H-Indole-3-carboxylic acid, 8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester, endo-[CAS]	65189-78-8	GB 2125398	Antiemetic	Pollakisuria
tropisetron		89565-68-4			
Trospectomycin		88669-04-9			
trospium	3Alpha-Hydroxyspiro[1AlphaH,5AlphaH-nortropane-8,1'-pyrrolidinium] benzilate	10405-02-4	US 5164402	Urological	Infection, respiratory tract, general
trovaflxacin	1,8-Naphthyridine-3-carboxylic acid, 7-(6-amino-3-azabicyclo[3.1.0]hex-3-yl)-1-(2,4-difluorophenyl)-6-fluoro-1,4-dihydro-4-oxo-, (1Alpha,5Alpha,6Alpha)-, [CAS]	147059-72-1 147059-75-4			
troxacitabine	2(1H)-Pyrimidinone, 4-amino-1-(2-(hydroxymethyl))-1,3-dioxolan-4-yl)-, (2S-cis)-[CAS]	145918-75-8			
Troxeutin	Benzamide, 3,4,5-trimethoxy-N-3-piperidinyl-, (+/-)- [CAS]	7085-55-4	US 3647805	Anticancer, other	Cancer, leukaemia, acute myelogenous
troxipide		30751-05-4 99777-81-8			
Trypan Red		574-64-1			
Tryparsamide	6,14-Ethenomorphinan-7-methanol, 17-(cyclopropylmethyl)-Alpha-(1,1-dimethylethyl)-, 5-epoxy-18,19-dihydro-3-hydroxy-6-methoxy-Alpha-methyl-, [5Alpha,7Alpha,(S)]- [CAS]	554-72-3	US 6180669	Formulation, transdermal, patch	Pain, cancer
Tryptophan		73-22-3			
TSH		9002-71-5			
TSN-09	Nonanedioic acid, bis[(2-(ethoxycarbonyl)phenyl] ester	52485-79-7	US 6180669	Antiacne	Acne
TU-2100					



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Tuaminoheptane	Benzenemethanol, 2-chloro-Alpha-[[[(1,1-dimethylethyl)amino]methyl]- [CAS]	123-82-0	DE 2244737	Antiasthma	Asthma
Tubercidin		69-33-0			
Tubocurarine Chloride		57-94-3			
tulobuterol	N-(Propargyl-(3R)aminoindan-5-yl)-ethyl methyl carbamate	41570-61-0	US 4837342	Cognition enhancer	Alzheimer's disease
TV-3326					
TY-11223	Acetic acid, [2-[2,3,3a,6,7,7a-hexahydro-2-hydroxy-1-(3-hydroxy-4,4-dimethyl-1,6-nonadienyl)-1H-inden-5-yl]ethoxy]-, [1S-[1Alpha(R*),2Beta,3aAlpha,7aAlpha]]- [CAS]	140694-43-5	US 6258829	Antithrombotic	Unspecified
	6,7,8,9-Tetrahydro-2-methyl-5H-cyclohepta[b]pyridine-3-carbonylguanidine maleate				
TY-12533	D-Glucitol, 1,4:3,6-dianhydro-, dinitrate [CAS]	87-33-2	US 861852	Formulation, modified-release, other	Angina, general
TYB-3215		4268-36-4			
Tybamate	4-(1,1,3,3-Tetramethylbutyl)phenol polymer with formaldehyde and oxirane [CAS]	25301-02-4		Formulation, inhalable, topical	Cystic fibrosis
tyloxapol		24243-97-8			
Tymazoline	Benzoic acid, 2-[[3-(trifluoromethyl)phenyl]amino]-, butyl ester [CAS]	51-67-2	BE 861852	Antipruritic/inflamm, non-allergic	
Tyramine		7246-21-1			
Tyropanoate		58970-76-6			
Ubenimex					
ufenamate	Undecylenic Acid	67330-25-0			
		112-38-9			
Unoprostone		120373-36-6			

## Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
UR-8880	4-[4-Chloro-5-(3-fluoro-4-methoxyphenyl)imidazol-1-imidazol-1-yl]benzenesulfonamide- [CAS]			Anti-inflammatory	Inflammation, general
Uracil Mustard		66-75-1			
Uralyt-U	1,2,3-Propanetricarboxylic acid, 2-hydroxy-, potassium sodium salt (5:6:6), hydrate [CAS]	55049-48-4	US 4400535	Urological	
urapidil	2,4(1H,3H)-Pyrimidinedione, 6-[[3-[4-(2-methoxyphenyl))-1-piperazinyl]propyl]amino]-1,3-dimethyl- [CAS]	34661-75-1	GB 1309324	Antihypertensive, adrenergic	Hypertension, general
urea	Urea [CAS]	57-13-6		Antipsoriasis	
Uredepa		302-49-8			
Urethan		51-79-6			
Uridine 5' -Triphosphate		63-39-8			
Urinastatin		80449-31-6			
ursodeoxycholic acid	3Alpha,7beta-dihydroxy-5beta-cholan-24-oic acid [CAS]	128-13-2		Formulation, other, Cirrhosis, primary biliary, hepatic dysfunction, biliary calculus	Cirrhosis, primary biliary
Ursodiol		128-13-2			
Ushercell			US 6063773	Formulation, mucosal, topical	Contraceptive, female
Uzarin		20231-81-6			
valaciclovir	L-Valine, 2-[(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)methoxy]ethyl ester [CAS]	124832-26-4	EP 308065	Antiviral, other	Infection, herpes simplex virus
Valacyclovir		124832-26-4			
valdecoxib	Benzenesulfonamide, 4-(5-methyl-3-phenyl-4-isoxazolyl)- [CAS]	181695-72-7	US 5859257	Antiarthritic, other	Arthritis, rheumatoid
Valdetamide		512-48-1			
Valethamate		90-22-2			
valganciclovir	L-Valine, 2-[(2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)methoxy]-3-hydroxypropyl ester [CAS]	175865-59-5			
Valnoctamide		175865-60-8	EP 694547	Antiviral, other	Infection, cytomegalovirus

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
valomaciclovir	L-Valine (3R)-3-((2-amino-1,6-dihydro-6-oxo-9H-purin-9-yl)methyl)-4-((1-oxooctadecyl)oxy)butyl ester [CAS]	195156-77-5		Antiviral, other	Infection, herpes simplex virus
valproate	Pentanoic acid, 2-propyl-, [CAS]	76584-70-8	US 4988731	Antiepileptic	Epilepsy, generalized, tonic-clonic
<b>Valproic Acid</b>		1069-66-5			
<b>Valpromide</b>		99-66-1			
		2430-27-5			
valrocamide	Pentanamide, N-(2-amino-2-oxoethyl)-2-propyl-, [CAS]	92262-58-3	US 5585358	Antiepileptic	Epilepsy, general
	Pentanoic acid, 2-(1,2,3,4,6,11-hexahydro-2,5,12-trihydroxy-7-methoxy-6,11-dioxo-4-((2,3,6-trideoxy-3-(trifluoroacetyl)amino)-Alpha-L-lyxo-hexopyranosyl)oxy)-2-naphthacenyl)-2-oxoethyl ester (2S-cis)-[CAS]				
valrubicin	L-Valine, N-(1-oxopentyl)-N-[[2'-(1H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl]methyl]-[CAS]	56124-62-0	US 4035566	Anticancer, antibiotic	Cancer, bladder
valsartan		137862-53-4	EP 443983	Antihypertensive, renin system	Hypertension, general
<b>Valspodar</b>		121584-18-7			
	Piperazine, 1-(3-(1,4-dihydro-5-methyl(-4-oxo-7-propylimidazo(5,1-f)(1,2,4)-triazin-2-yl)-4-ethoxyphenyl)sulfonyl)-4-ethyl-, [CAS]	224785-90-4		Male sexual dysfunction	Sexual dysfunction, male, general
varidenafil	Acetic acid, ((3-(aminooxoacetyl)-2-ethyl-1-(phenylmethyl)-1H-indol-4-yl)oxy)-, [CAS]	172732-68-2 172733-42-5	EP 675110	Septic shock treatment	Sepsis
varespladib					
<i>Varicella Virus</i>					
<i>Vaccine</i>					
	3,5-Pyridinedicarboxylic acid, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-, 2-[4-[4-(diphenylmethyl)-1-piperazinyl]phenyl]ethyl methyl ester, [CAS]	116308-55-5 133743-71-2	EP 257616 US 6007817	Neuroprotective Radio/chemosensitizer	Hypertension, general Cancer, general
vatanidipine					
VEA					

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
vecuronium	Piperidinium, 1- [(2β,3Alpha,5Alpha,16β,17β)-3,17-bis(acetyloxy)-2-(1-piperidiny)androst-16-yl]-1-methyl-, [CAS]	50700-72-6	US 4237126	Muscle relaxant	Anaesthesia, adjunct
<b>Velnacrine</b>		104675-29-8			
venlafaxine	Cyclohexanol, 1-[2-(dimethylamino)-1-(4-methoxyphenyl)ethyl]-, [CAS]	93413-69-5	GB 2227743	Antidepressant	Depression, general
<b>Veralipride</b>		66644-81-3			
verapamil	Benzeneacetoneitrile, Alpha-[3-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]propyl]-3,4-dimethoxy-Alpha-(1-methylethyl)-[CAS]	52-53-9		Formulation, modified-release, other	Hypertension, general
verteporfin	23H,25H-Benzol[b]porphine-9,13-dipropionic acid, 18-ethenyl-4,4a-dihydro-3,4-bis(methoxycarbonyl)-4a,8,14,19-tetramethyl-, monomethyl ester, trans-[CAS]	129497-78-5	US 5238940	Ophthalmological	Macular degeneration
vesnarinone	Piperazine, 1-(3,4-dimethoxybenzoyl)-4-(1,2,3,4-tetrahydro-2-oxo-6-quinoliny)-[CAS]	81840-15-5	GB 2086896	Cardiostimulant	Heart failure
<b>Vetrabutine</b>		3735-45-3			
VF-233	Benzene carboximidamide, N,3,4,5-tetrahydroxy- [CAS]	95933-74-7	US 4623659	Cardiovascular	Reperfusion injury
VI-0134	9H-Purin-6-amine, 9-β-D-arabinofuranosyl-[CAS]	24356-66-9	US 6403597	Male sexual dysfunction	Premature ejaculation
vidarabine	5-Hexenoic acid, 4-amino- [CAS]	5536-17-4	GB 1159290	Antiviral, other	Infection, herpes virus, general
vigabatrin	2-Benzofurancarboxamide, 5-[4-{4-(5-cyano-1H-indol-3-yl)butyl}-1-piperazinyl]-[CAS]	68506-86-5 60643-86-9	GB 1472525	Antiepileptic	Epilepsy, partial (focal, local)
vilazodone		163521-12-8	EP 648767	Antidepressant	Depression, general
<b>Viloxazine</b>		46817-91-8			
<b>Viminol</b>		21363-18-8			
<b>Vinbarbital</b>		125-44-0			
<b>Vinblastine</b>		865-21-4			
vinburnine	Eburnamenin-14(15H)-one, (3Alpha,16Alpha)- [CAS]	474-00-0	DE 1932245	Cognition enhancer	
		4880-88-0			

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
Vincamine	Vincal leukoblastine, 22-oxo-, sulfate (1:1) (salt) [CAS]	1617-90-9			
Vinconate		70704-03-9			
vincristine		2068-78-2	EP	Formulation, parenteral, other	Cancer, general
		57-22-7			
vindesine	Vincal leukoblastine, 3-(aminocarbonyl)-O4-deacetyl-3-de(methoxycarbonyl)- [CAS]	53643-48-4	GB	Anticancer, other	Cancer, leukaemia, acute lymphocytic
	Aspidospermidine-3-carboxylic acid, 4-(acetyloxy)-6,7-didehydro-15-[(2R,4R,6S,8S)-4-(1,1-difluoroethyl)-1,3,4,5,6,7,8,9-octahydro-8-(methoxycarbonyl)-2,6-methano-2H-azecino[4,3-b]indol-8-yl]-3-hydroxy-16-methoxy-1-methyl-, methyl ester, (2R,3R,4R,5Apha,12R,19Apha) - [CAS]	162652-95-1	FR	Anticancer, other	Cancer, general
vinflunine	C'-Norvincal leukoblastine, 3',4'-didehydro-4'-deoxy- [CAS]	71486-22-1	EP	Anticancer, other	Cancer, lung, non-small cell
vinorelbine	Eburnamenine-14-carboxylic acid, ethyl ester, (3Apha,16Apha)- [CAS]	42971-09-5	GB	Cognition enhancer	Cognitive disorder, general
vinpocetine		109-93-3			
Vinyl Ether		2430-49-1			
Vinylbital		84-55-9			
Viquidil		3306-52-3			
Viridin		477-32-7			
Visnadine		68-26-8			
Vitamin A		68-19-9		Formulation, transmucosal, nasal	Anaemia, general
vitamin B12	Vitamin B12 [CAS]			Formulation, modified-release, <=24hr	Nutrition
vitamin C	L-Ascorbic acid [CAS]	50-81-7			
Vitamin D <sub>2</sub>		50-14-6			
Vitamin D <sub>3</sub>		67-97-0			
Vitamin K <sub>5</sub>		83-70-5			
Vitamins, Prenatal					

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
VLA-4 antagonists	((R,S)-4-(4-(Amino-imino-methyl)-phenyl)-3-((4-biphenyl)-methyl)-4-methyl-2,5-dioximidazolidin-1-yl)-acetyl-L-N-methyl-aspartyl-L-phenylglycine		EP 842943	Antiasthma	Asthma
VNP-40101M	1,2-Bis(methylsulfonyl)-1-(2-chloroethyl)-2-(methylamino)carbonylhydrazine		US 6040338	Anticancer, alkylating	Cancer, general
voglibose	D-epi-Inositol, 3,4-dideoxy-4-[[2-hydroxy-1-(hydroxymethyl)ethyl]amino]-2-C-(hydroxymethyl)- [CAS]	83480-29-9	EP 56194	Antidiabetic	Diabetes, Type II
voriconazole	4-Pyrimidineethanol, Alpha-(2,4-difluorophenyl)-5-fluoro-β-methyl-Alpha-(1H-1,2,4-triazol-1-ylmethyl)-, (R-(R*,S*))-[CAS]	137234-62-9 129731-10-8	EP 440372	Antifungal	Infection, fungal, general
VUF-K-8788 Warfarin	7-[3-[4-(2-Quinolinylmethyl)-1-piperazinyl]propoxy]-3,4-dihydro-2H-1,4-benzothiazine-3-one	81-81-2		Antiasthma	Asthma
WF-10	Tetrachlorodecaoxide [CAS] 2-(3-[4-[3-(6-oxo-6H-2,10b-diazaaceanthrenyl)-5-ylamino]propyl]-piperazin-1-yl]propyl)-5-nitro-2-azaphenylene-1,3-dione	92047-76-2		Radio/chemoprotective	Chemotherapy-induced injury, bone marrow, general
WMC-79 wound healing matrix	Pyridine, 1,2,3,6-tetrahydro-1-[2-(2-naphthalenyl)ethyl]-4-[3-(trifluoromethyl)phenyl]-, [CAS]	90494-79-4 135354-020-8	US 5897880 US 6531121	Anticancer, other Formulation, transdermal, patch Cytokine	Cancer, colorectal Ulcer, diabetic Unspecified
WP-170	4-Morpholinecarboxamide, N-[2-[[2-hydroxy-3-(4-hydroxyphenoxy)propyl]amino]ethyl]-, (+/-)-[CAS]	73210-73-8 81801-12-9	EP 101381	Neuroprotective	Amyotrophic lateral sclerosis
xaliprodol					
xamoterol			GB 2002748	Cardiosimulant	Heart failure

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
<b>Xanomeline</b>	Phenol, 4,5-dimethyl-2-(1,7,7-trimethylbicyclo[2.2.1]hept-2-yl)-, exo-[CAS]	131986-45-3	GB 1206774	Antibacterial, other	Infection, general
<b>Xanthinol Niacinate</b>		437-74-1			
<b>Xemilofiban</b>		149820-74-6			
<b>Xenbucin</b>		959-10-4			
<b>Xibenolol</b>		81584-06-7			
<b>xibornol</b>		13741-18-9			
<b>ximelagatran</b>	Glycine, N-((R)-cyclohexyl-2-((2S)-2-(((4-(hydroxyamino)iminomethyl)phenyl)methyl)amino)carbonyl)-1-azetidyl)2-oxoethyl ester [CAS]	192939-46-1	US 3567777	Antithrombotic	Thrombosis, venous
<b>Ximoprofen</b>		56187-89-4			
<b>xipamide</b>	Benzamide, 5-(aminosulfonyl)-4-chloro-N-(2,6-dimethylphenyl)-2-hydroxy- [CAS]	14293-44-8	US 3567777	Antihypertensive, diuretic	Pain, cancer
<b>xorphanol</b>	Morphinan-3-ol, 17-(cyclobutylmethyl)-8-methyl-6-methylene-, (8S)- [CAS]	77287-89-9			
<b>XR-5118</b>	2,5-Piperazinedione, 3-[[5-[[2-(dimethylamino)ethyl]thio]-2-thienyl]methylene]-6-(phenylmethylene)-, monohydrochloride, (3Z,6Z)- [CAS]	174766-49-5	WO 9532190	Anticancer, other	Cancer, general
<b>XR-5944</b>	N,N'-(1,2-Ethanediy)bis(imino-2,1-ethanediy)bis(9-methylphenazine-1-carboxamide)	526-36-3 58-86-6	EP 934278	Anticancer, other	Cancer, general
<b>Xylometazoline</b>	2-Pyrimidinamine, 4-(3,4-dihydro-1-methyl-2(1H)-isoquinolyl)-N-(4-fluorophenyl)-5,6-dimethyl-, monohydrochloride [CAS]		WO 9605177	Antitumor	Ulcer, GI, general
<b>Xylose</b>	Benzonitrile, 4-[[[(4-bromophenyl)methyl]-4H-1,2,4-triazol-4-ylamino]- [CAS]	178307-42-1			
<b>YH-1885</b>		148869-05-0	WO 9305027	Anticancer, hormonal	Cancer, breast
<b>YM-511</b>					

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
YM-598	potassium(E)-N-[6-methoxy-5-(2-methoxyphenoxy)-2-(pyrimidin-2-yl)pyrimidin-4-yl]-2-phenylethanesulfonamide	146-48-5 90596-75-1	US 5270304	Anticancer, other	Cancer, prostate
<b>Yohimbine</b> YT-146	Adenosine, 2-(1-octynyl)- [CAS] Thiazolidine, 3-((2,3-dihydro-1H-inden-2-yl)acetyl)-4-(1-pyrrolidinylcarbonyl)-, (R)- [CAS]	146-48-5 90596-75-1	US 5270304	Anti-inflammatory	Inflammation, general
Z-321	(1H-Indene-5-acetic acid, 2[[[(4-chlorophenyl)sulfonyl]amino]methyl]-2,3-dihydro, monosodium salt) [CAS]	130849-58-0	EP 372484	Cognition enhancer	Dementia, senile, general
Z-335	Carbamic acid, [3-[[2-methoxy-4-[[[(2-methylphenyl)sulfonyl]amino]carbonyl]phenyl]methyl]-1-methyl-1H-indol-5-yl]-, cyclopentyl ester [CAS] Cytidine, 2',3'-dideoxy- [CAS]	146731-14-8	JP 92506077	Antithrombotic	Peripheral vascular disease
zafirlukast zalcitabine	Acetamide, N-[3-(3-cyanopyrazolo[1,5-a]pyrimidin-7-yl)phenyl]-N-ethyl- [CAS] Dibenzol[b,f]thiepin-2-acetic acid, 10,11-dihydro-Alpha-methyl-10-oxo- [CAS]	107753-78-6 7481-89-2 109826-26-8	EP 199543 US 4879277	Antiasthma Antiviral, anti-HIV	Asthma Infection, HIV/AIDS
<b>Zaldaride</b>	5-Acetamido-2,6-anhydro-3,4,5-trideoxy-4-guanidino-D-glycero-D-galacto-non-2-enonic acid [CAS]	151319-34-5	EP 776898	Hypnotic/Sedative	Insomnia
zaleplon	1-Propanone, 3-(1-(phenylmethyl)-4-piperidinyl)-1-(2,3,4,5-tetrahydro-1H-1-benzazepin-8-yl)- [CAS]	74711-43-6	JP 55053282	Anti-inflammatory	
zaltoprofen					
zanamivir	Platinum, amminedichloro(2-methylpyridine)- (SP-4-3)- [CAS] N-acetylcolchicol-O-phosphate	139110-80-8	WO 9116320	Antiviral, other	Infection, influenza virus
zanapezil		142852-50-4 85175-67-3	EP 487071	Cognition enhancer	Alzheimer's disease
<b>Zatebradine</b>					
ZD-0473		181630-15-9	EP 727430	Anticancer, alkylating	Cancer, ovarian
ZD-0947			WO 9528388	Urological	Overactive bladder
ZD-6126				Anticancer, other	Cancer, general
ZD-9331	1H-Tetrazole-5-butanolic acid, Alpha-((4-(((1,4-dihydro-2,7-dimethyl-4-oxo-6-quinazolinyl)methyl)-2-propynylamino)-2-fluorobenzoyl)amino) (S)- [CAS]	153537-73-6	GB 2264946	Anticancer, antimetabolite	Cancer, pancreatic

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
zebularine	2(1H)-Pyrimidinone, 1-β-D-ribofuranosyl- [CAS] 7,8-Isoquinolinediol, 4-(3,4-dihydroxyphenyl)-1,2,3,4-tetrahydro-, [CAS]	3690-10-6		Anticancer, other	Cancer, general
zelandopam		138086-00-7	JP 03190818	Vasodilator, renal	Hypertension, general
<b>Zenarestat</b>		112733-06-9			
<b>Ziconotide</b>		107452-89-1			
zidovudine	Thymidine, 3'-azido-3'-deoxy- [CAS] Urea, N-(1-benzo[b]thien-2-ylethyl)-N-hydroxy- [CAS]	30516-87-1	US 4724232	Antiviral, anti-HIV	Infection, HIV/AIDS
zileuton		111406-87-2	EP 279263	Antiasthma	Asthma
<b>Zimeldine</b>		56775-88-3			
zinc acetate	hexakis(Im-acetato)-Im4-oxotetrazinc Hexanoic acid, 6-(acetylamino)-, zinc salt (2:1)- [CAS]	12129-82-7		Antiviral, other	Infection, herpes simplex virus prophylaxis
zinc acexamate		70020-71-2	EP 369088	Antilulcer	Ulcer, duodenal
zinc ibuprofenate		78416-80-5		Anti-inflammatory, topical	Inflammation, dermal
<b>Zinc p-Phenolsulfonate</b>		127-82-2			
<b>Zinc Salicylate</b>		16283-36-6			
<b>Zinostatin</b>		9014-2-2			
zinostatin stimalamer		123760-07-6	EP 136791	Anticancer, antibiotic	Cancer, liver
<b>Zipeprol</b>		34758-83-3			
ziprasidone	2H-Indol-2-one, 5-(2-(4-(1,2-benzisothiazol-3-yl)-1-piperazinyl)ethyl)-6-chloro-1,3-dihydro- [CAS] L-Proline, 1-[3-(benzoylthio)-2-methyl-1-oxopropyl]-4-(phenylthio)-, [1(R*),2Alpha,4Alpha]- [CAS]	122883-93-6 146939-27-7 75176-37-3 81872-10-8 81938-43-4	EP 281309	Neuroleptic	Schizophrenia
zofenopril	L-Proline, 1-[3-(benzoylthio)-2-methyl-1-oxopropyl]-4-(phenylthio)-, [1(R*),2Alpha,4Alpha]- + 6-Chloro-3,4-dihydro-2H-1,2,4-benzothiazide-7-sulfonamide 1,1-dioxide [CAS] Phosphonic acid, [1-hydroxy-2-(1H-imidazol-1-yl)ethylidene]bis- [CAS]		GB 2028327	Antihypertensive, renin system	Hypertension, general
zofenopril + HCTZ				Formulation, fixed-dose combinations	Hypertension, general
zoledronic acid		118072-93-8 165800-06-6	EP 531253	Osteoporosis treatment	Hypercalcaemia of malignancy

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Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
zolimidine	2-(p-methylsulfonylphenyl)imidazo[1,2-a]pyridine	1222-57-7	US 3318880	Anticancer	Gastritis
zolmitriptan	2-Oxazolidinone, 4-((3-(2-(dimethylamino)ethyl)-1H-indol-5-yl)methyl)-, (S)- [CAS]	139264-17-8	WO 9118897	Antimigraine	Migraine
zolpidem	Imidazo[1,2-a]pyridine-3-acetamide, N,N,6-trimethyl-2-(4-methylphenyl)-(R-(R*, R**))-2,3-dihydroxybutanediotide (2:1) [CAS]	99294-93-6 82626-48-0	EP 50563	Hypnotic/Sedative	Insomnia
<b>Zonipirac</b>	1(2H)-Quinoxalineacetic acid, 3,4-dihydro-7-(1H-imidazol-1-yl)-6-nitro-2,3-dioxo- [CAS]	33369-31-2			
zonampanel	1H-pyrazole-4-carboxamide, N-(aminolimino methyl)-5-cyclopropyl-1-(5-quinoliny)-, [CAS]	210245-80-0		Neuroprotective	Ischaemia, cerebral
zoniporide	1,2-Benzisoxazole-3-methanesulfonamide [CAS]	249296-45-5 68291-97-4		Cardiovascular	Unspecified
zonisamide		68291-98-5	GB 2025931	Antiepileptic	Epilepsy, generalized, tonic-clonic
zopiclone	1-Piperazinecarboxylic acid, 4-methyl-, 6-(5-chloro-2-pyridinyl)-6,7-dihydro-7-oxo-5H-pyrrolo[3,4-b]pyrazin-5-yl ester [CAS]	43200-80-2	GB 1358680	Hypnotic/Sedative	Insomnia
<b>Zopolrestat</b>		110703-94-1			
<b>Zorubicin</b>		54083-22-6			
zosuquidar	1-Piperazineethanol, 4-(1,1-difluoro-1,1a,6,10b-tetrahydrodibenzo[a,e]cyclopropa[c]cyclohepten-6-yl)-Alpha-[(5-quinolinyloxy)methyl]-, [6(R)-(1aAlpha,6Alpha,10bAlpha)]- [CAS]	167465-36-3		Radio/chemosensitizer	Cancer, leukaemia, acute myelogenous
zotepine	Ethanamine, 2-[(8-chlorodibenzo[b,f]thiopin-10-yl)oxy]-N,N-dimethyl- [CAS]	26615-21-4	GB 1247067	Neuroleptic	Schizophrenia
<b>ZP-123</b>			WO 0162775	Antiarrhythmic	Arrhythmia, general
Z-tamoxifen	Ethanamine, 2-{4-(1,2-diphenyl-1-butenyl)phenoxy}-N,N-dimethyl-, (Z)- [CAS]	10540-29-1		Anticancer, hormonal	Cancer, colorectal

Table IV

API Generic Name	API Chemical Name	CAS No.	Patent Reference	Example of Therapeutic Use	Example of Indication
zuclopenthixol	1-Piperazineethanol, 4-[3-(2-chloro-9H-thioxanthen-9-ylidene)propyl]-, (Z)-[CAS]	53772-83-1	EP 270282	Neuroleptic	Psychosis, general
		982-24-1			
		85721-05-7			
		64053-00-5			

**CLAIMS:**

1. A pharmaceutical co-crystal composition, comprising: an API and a co-crystal former, wherein both the API and the co-crystal former are solids at room temperature and the API and co-crystal former are hydrogen bonded to each other.
2. The pharmaceutical co-crystal composition according to claim 1, wherein the co-crystal former is selected from a co-crystal former of Table I or Table II.
3. The pharmaceutical co-crystal composition according to claim 1, wherein the API is selected from an API of Table IV.
4. The pharmaceutical co-crystal composition according to claim 1, wherein the API is selected from an API of Table IV and the co-crystal former is selected from a co-crystal former of Table I or Table II.
5. A pharmaceutical co-crystal composition, comprising: an API, a co-crystal former, and a third molecule, wherein the API and the co-crystal former are solids at room temperature, and wherein the API and the third molecule are bonded to each other, and further wherein the co-crystal former and the third molecule are hydrogen bonded to each other.
6. A pharmaceutical co-crystal composition, comprising: an API and a co-crystal former, wherein the API is liquid and the co-crystal former is solid at room temperature, and wherein the API and the co-crystal former are hydrogen bonded to each other.
7. The pharmaceutical co-crystal composition according to claim 6, wherein the API is selected from an API of Table IV and the co-crystal former is selected from a co-crystal former of Table I or Table II.
8. A pharmaceutical co-crystal composition, comprising: two APIs, wherein one or both of the APIs are solids at room temperature, and wherein the two APIs are hydrogen bonded to each other.



9. The pharmaceutical co-crystal composition according to claim 8, wherein each API is selected from an API of Table IV.
10. A pharmaceutical co-crystal composition, comprising: two co-crystal formers, wherein both co-crystal formers are solids at room temperature, and wherein both co-crystal formers are hydrogen bonded to each other.
11. The pharmaceutical co-crystal composition according to claim 10, wherein each co-crystal former is selected from a co-crystal former of Table I or Table II.
12. The pharmaceutical co-crystal composition according to claim 1, wherein the API and the co-crystal former form an inclusion complex.
13. A pharmaceutical co-crystal composition, comprising: an API and a co-crystal former; wherein the API has at least one functional group selected from the group consisting of ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine, and the co-crystal former has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine, such that the drug and co-crystal forming compound are capable of co-crystallizing from a solution phase under crystallization conditions and a hydrogen bond is formed between a hydrogen bond donor and a hydrogen bond acceptor.
14. The pharmaceutical composition according to claim 1, wherein (i) one of the API and co-crystal forming compound has at least one hydrogen bond donor group and (ii) the other has at least one hydrogen bond acceptor group.

15. The pharmaceutical composition according to claim 14, wherein the difference in pKa between the API and the co-crystal forming compound does not exceed 2.
16. The pharmaceutical composition according to claim 1, wherein the API is selected from celecoxib, carbamazepine, itraconazole, olanzapine, topiramate and modafinil.
17. The pharmaceutical composition according to claim 1, wherein the API is selected from 5-fluorouracil, hydrochlorothiazide, acetaminophen, aspirin, flurbiprofen, phenytoin, and ibuprofen.
18. The pharmaceutical composition according to claim 1, which further comprises a pharmaceutically acceptable diluent, excipient or carrier.
19. A co-crystal comprising carbamazepine and saccharin.
20. A co-crystal comprising carbamazepine and nicotinamide.
21. A co-crystal comprising carbamazepine and trimesic acid.
22. A co-crystal comprising celecoxib and nicotinamide.
23. A co-crystal comprising olanzapine and nicotinamide.
24. A co-crystal comprising celecoxib and 18-crown-6.
25. A co-crystal comprising itraconazole and succinic acid.
26. A co-crystal comprising itraconazole and fumaric acid.
27. A co-crystal comprising itraconazole and tartaric acid.
28. A co-crystal comprising itraconazole and malic acid.

29. A co-crystal comprising itraconazoleHCl and tartaric acid.
30. A co-crystal comprising modafinil and malonic acid.
31. A co-crystal comprising modafinil and benzamide.
32. A co-crystal comprising modafinil and mandelic acid.
33. A co-crystal comprising modafinil and glycolic acid.
34. A co-crystal comprising modafinil and fumaric acid.
35. A co-crystal comprising modafinil and maleic acid.
36. A co-crystal comprising topiramate and 18-crown-6.
37. A co-crystal comprising 5-fluorouracil and urea.
38. A co-crystal comprising hydrochlorothiazide and nicotinic acid.
39. A co-crystal comprising hydrochlorothiazide and 18-crown-6.
40. A co-crystal comprising hydrochlorothiazide and piperazine.
41. A co-crystal comprising acetaminophen and 4,4'-bipyridine.
42. A co-crystal comprising phenytoin and pyridone.
43. A co-crystal comprising aspirin and 4,4'-bipyridine.
44. A co-crystal comprising ibuprofen and 4,4'-bipyridine.
45. A co-crystal comprising flurbiprofen and 4,4'-bipyridine.

46. A co-crystal comprising flurbiprofen and trans-1,2-bis(4-pyridyl) ethylene.
47. A co-crystal comprising carbamazepine and p-phthalaldehyde.
48. A co-crystal comprising carbamazepine and 2,6-pyridinecarboxylic acid.
49. A co-crystal comprising carbamazepine and 5-nitroisophthalic acid.
50. A co-crystal comprising carbamazepine and 1,3,5,7-adamantane tetracarboxylic acid.
51. A co-crystal comprising carbamazepine and benzoquinone.
52. A process for the production of a pharmaceutical co-crystal composition, which process comprises:
  - (1) providing an API which has at least one functional group selected from the group consisting of: ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;
  - (2) providing a co-crystal former which has at least one complementary functional group selected from the group consisting of: ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;
  - (3) grinding, heating, or contacting in solution the API with the co-crystal former under crystallization conditions; so as to form a solid phase;
  - (4) isolating co-crystals formed thereby; and

(5) incorporating the co-crystals into a pharmaceutical composition; wherein the API is a liquid or solid at room temperature and the co-crystal former is a solid at room temperature, and wherein the API and co-crystal former are hydrogen bonded to each other.

53. The process according to claim 52, wherein:

- (a) the co-crystal former is selected from a co-crystal former of Table I or Table II;
- (b) the API is selected from an API of Table IV;
- (c) the API is selected from an API of Table IV and the co-crystal former is selected from a co-crystal former of Table I or Table II;
- (d) the API and the co-crystal former form an inclusion complex;
- (e) (i) one of the API and co-crystal forming compound has at least one hydrogen bond donor group; and  
(ii) the other has at least one hydrogen bond acceptor group;
- (f) the difference in pKa between the API and the co-crystal former does not exceed 2;
- (g) the API is selected from the group consisting of celecoxib, carbamazepine, itraconazole, olanzapine, topiramate, and modafinil;
- (h) the API is selected from the group consisting of 5-fluorouracil, hydrochlorothiazide, acetaminophen, aspirin, flurbiprofen, phenytoin, and ibuprofen; or
- (i) the pharmaceutical co-crystal composition further comprises a pharmaceutically acceptable diluent, excipient, or carrier.

54. The process for the production of a pharmaceutical co-crystal composition, which process comprises:

- (3) providing an API which has at least one functional group selected from the group consisting of ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;

- (4) providing a co-crystal former which has at least one complementary functional group selected from the group consisting of ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;
- (3) grinding, heating, or contacting in solution the API with the co-crystal former under crystallization conditions; so as to form a solid phase;
- (4) isolating co-crystals formed thereby; and
- (5) incorporating the co-crystals into a pharmaceutical composition; wherein the API is a liquid or solid at room temperature and the co-crystal former is a solid at room temperature, and wherein the API and a third molecule are bonded to each other, and further wherein the co-crystal former and the third molecule are hydrogen bonded to each other.

55. The process according to claim 52, wherein: the API is a liquid at room temperature.

56. The process according to claim 55, wherein the API is selected from an API of Table IV and the co-crystal former is selected from a co-crystal former of Table I or Table II.

57. A process for the production of a pharmaceutical co-crystal composition, which process comprises:

- (1) providing an API which has at least one functional group selected from the group consisting of ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;
- (2) providing another API which has at least one complementary functional group selected from the group consisting of ether, thioether, alcohol, thiol, aldehyde, ketone,



thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;

- (3) grinding, heating, or contacting in solution the APIs under crystallization conditions; so as to form a solid phase;
- (4) isolating co-crystals formed thereby; and
- (5) incorporating the co-crystals into a pharmaceutical composition; wherein one

or both of the APIs are solids at room temperature, and wherein the two APIs are hydrogen bonded to each other.

58. The process according to claim 57, wherein each API is selected from an API of Table IV.

59. A process for the production of a pharmaceutical co-crystal composition, which process comprises:

- (1) providing a co-crystal former which has at least one functional group selected from the group consisting of ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;
- (2) providing another co-crystal former which has at least one complementary functional group selected from the group consisting of ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile, diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, and pyridine;

- (3) grinding, heating, or contacting in solution the co-crystal formers under crystallization conditions; so as to form a solid phase;
- (4) isolating co-crystals formed thereby; and
- (5) incorporating the co-crystals into a pharmaceutical composition; wherein both co-crystal formers are solids at room temperature, and wherein both co-crystal formers are hydrogen bonded to each other.

60. The process according to claim 59, wherein each co-crystal former is selected from a co-crystal former of Table I and Table II.

61. The process according to claim 52, wherein the co-crystal is selected from the group consisting of carbamazepine:saccharin, carbamazepine:nicotinamide, carbamazepine:trimesic acid, celecoxib:nicotinamide, olanzapine:nicotinamide, celecoxib:18-crown-6, itraconazole:succinic acid, itraconazole:fumaric acid, itraconazole:tartaric acid, itraconazole:malic acid, itraconazoleHCl:tartaric acid, modafinil:malonic acid, modafinil:benzamide, modafinil:mandelic acid, modafinil:glycolic acid, modafinil:fumaric acid, modafinil:maleic acid, topiramate:18-crown-6, 5-fluorouracil:urea, hydrochlorothiazide:nicotinic acid, hydrochlorothiazide:18-crown-6, hydrochlorothiazide:piperazine, acetaminophen:4,4'-bipyridine, phenytoin:pyridone, aspirin:4,4'-bipyridine, ibuprofen:4,4'-bipyridine, flurbiprofen:4,4'-bipyridine, flurbiprofen:trans-1,2-bis(4-pyridyl) ethylene, carbamazepine:p-phthalaldehyde, carbamazepine:2,6-pyridinecarboxylic acid, carbamazepine:5-nitroisophthalic acid, carbamazepine:1,3,5,7-adamantane tetracarboxylic acid, and carbamazepine:benzoquinone.

62. A process for the production of a pharmaceutical composition, which comprises:

- (1) contacting in solution an API with a co-crystal forming compound, under crystallization conditions, so as to form a solid phase;
- (2) isolating the solid phase;
- (3) testing the solid phase for the presence of co-crystals of the API and the co-crystal forming compound; and
- (4) incorporating the co-crystals when formed in step (3) into a pharmaceutical composition.

63. A process for the production of a pharmaceutical composition, which comprises:

- (1) providing (i) an API or a plurality of different APIs, and (ii) a co-crystal forming compound or a plurality of different co-crystal forming compounds, wherein at least one of the API and the co-crystal forming compound is provided as a plurality thereof;
- (2) screening for co-crystals of APIs with co-crystal forming compounds by subjecting each combination of API and co-crystal forming compound to a step comprising
  - (a) contacting in solution the API with the co-crystal forming compound under crystallization conditions so as to form a solid phase;
  - (b) isolating the solid phase; and
  - (c) testing the solid phase for the presence of co-crystals of the API and the co-crystal forming compound; and
- (3) incorporating the co-crystals when formed in step (c) into a pharmaceutical composition.

64. A process for modulating the solubility of an API for use in a pharmaceutical composition, which process comprises:

- (1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;
- (2) isolating the co-crystal;
- (3) testing the co-crystal for modulated solubility as compared to the API; and
- (4) incorporating the co-crystal having modulated solubility into a pharmaceutical composition.

65. A process for modulating the dose response of an API for use in a pharmaceutical composition, which process comprises:

- (1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;
  - (2) isolating the co-crystal;
  - (3) testing the co-crystal for modulated dose response as compared to the API;
- and
- (4) incorporating the co-crystal having modulated dose response into a pharmaceutical composition.

66. A process for modulating the dissolution of an API for use in a pharmaceutical composition, which process comprises:

- (1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;
- (2) isolating the co-crystal;
- (3) testing the co-crystal for modulated dissolution as compared to the API; and
- (4) incorporating the co-crystal having modulated dissolution into a pharmaceutical composition.

67. A process for modulating the bioavailability of an API for use in a pharmaceutical composition, which process comprises:

- (1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;
- (2) isolating the co-crystal;
- (3) testing the co-crystal for modulated bioavailability as compared to the API; and
- (4) incorporating the co-crystal having modulated bioavailability into a pharmaceutical composition.

68. A process for increasing the stability of an API for use in a pharmaceutical composition, which process comprises:

- (1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;
- (2) isolating the co-crystal, wherein the co-crystal has increased stability as compared to the API; and
- (3) incorporating the co-crystal having increased stability into a pharmaceutical composition.

69. A process for the incorporation of a difficult to salt or unsaltable API for use in a pharmaceutical composition, which process comprises:

(1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;

(2) isolating the co-crystal;

(3) incorporating the co-crystal having a difficult to salt or unsaltable API into a pharmaceutical composition.

70. A process for decreasing the hygroscopicity of an API for use in a pharmaceutical composition, which process comprises:

(1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;

(2) isolating the co-crystal, wherein the co-crystal has decreased hygroscopicity as compared to the API; and

(3) incorporating the co-crystal having decreased hygroscopicity into a pharmaceutical composition.

71. A process for crystallizing an amorphous API for use in a pharmaceutical composition, which process comprises:

(1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;

(2) isolating the co-crystal;

(4) incorporating the co-crystal into a pharmaceutical composition.

72. A process for decreasing the form diversity of an API for use in a pharmaceutical composition, which process includes:

(1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;

(2) isolating the co-crystal wherein the co-crystal has decreased form diversity as compared to the API; and

(3) incorporating the co-crystal having decreased form diversity into a pharmaceutical composition.

73. A process for modulating the morphology of an API for use in a pharmaceutical composition, which process includes:

- (1) contacting in solution the API with a co-crystal forming compound under crystallization conditions, so as to form a co-crystal of the API and the co-crystal forming compound;
- (2) isolating the co-crystal, wherein the co-crystal has a different morphology as compared to the API; and
- (3) incorporating the co-crystal having modulated morphology into a pharmaceutical composition.

74. The co-crystal of claim 1, specifically excluding co-crystals selected from the group consisting of: nabumetone:2,3-naphthalenediol, fluoxetine HCl:benzoic acid, fluoxetine HCl:succinic acid, acetaminophen:piperazine, acetaminophen:theophylline, theophylline:salicylic acid, theophylline:p-hydroxybenzoic acid, theophylline:sorbic acid, theophylline:1-hydroxy-2-naphthoic acid, theophylline:glycolic acid, theophylline:2,5-dihydroxybenzoic acid, theophylline:chloroacetic acid, bis(diphenylhydantoin):9-ethyladenine acetylacetone solvate, bis(diphenylhydantoin):9-ethyladenine 2,4-pentanedione solvate, 5,5-diphenylbarbituric acid:9-ethyladenine, bis(diphenylhydantoin):9-ethyladenine, 4-aminobenzoic acid:4-aminobenzonitrile, sulfadimidine:salicylic acid, 8-hydroxyquinolinium 4-nitrobenzoate:4-nitrobenzoic acid, sulfaproxyline:caffeine, retro-inverso-isopropyl (2R,3S)-4-cyclohexyl-2-hydroxy-3-(N-((2R)-2-morpholinocarbonylmethyl-3-(1-naphthyl)propionyl)-L-histidylamino)butyrate:cinnamic acid monohydrate, benzoic acid:isonicotinamide, 3-(2-N',N'-(dimethylhydrazino)-4-thiazolylmethylthio)-N''-sulfamoylpropionamidine:maleic acid, diglycine hydrochloride ( $C_2H_5NO_2:C_2H_6NO_2^+Cl^-$ ), octadecanoic acid:3-pyridinecarboxamide, cis-N-(3-methyl-1-(2-(1,2,3,4-tetrahydro)naphthyl)-piperidin-4-yl)-N-phenylpropanamide hydrochloride:oxalic acid, trans-N-(3-methyl-1-(2-(1,2,3,4-tetrahydro)naphthyl)-piperidin-4-yl)-N-phenylpropanamide oxalate:oxalic acid dihydrate, bis(1-(3-((4-(2-isopropoxyphenyl)-1-piperazinyl)methyl)benzoyl)piperidine) succinate:succinic acid, bis(p-cyanophenyl)imidazolymethane:succinic acid, cis-1-((4-(1-imidazolymethyl)cyclohexyl)methyl)imidazole:succinic acid, (+)-2-(5,6-dimethoxy-1,2,3,4-tetrahydro-1-naphthyl)imidazoline:(+)-dibenzoyl-D-tartaric acid, raclopride:tartaric acid, 2,6-diamino-9-ethylpurine:5,5-diethylbarbituric acid, 5,5-diethylbarbituric acid:bis(2-



aminopyridine), 5,5-diethylbarbituric acid:acetamide, 5,5-diethylbarbituric acid:KI<sub>3</sub>, 5,5-diethylbarbituric acid:urea, bis(barbital):hexamethylphosphoramide, 5,5-diethylbarbituric acid:imidazole, barbital:1-methylimidazole, 5,5-diethylbarbituric acid.N-methyl-2-pyridone, 2,4-diamino-5-(3,4,5-trimethoxybenzyl)-pyrimidine:5,5-diethylbarbituric acid, bis(barbital):caffeine, bis(barbital):1-methylimidazole, bis(beta-cyclodextrin):bis(barbital) hydrate, tetrakis(beta-cyclodextrin):tetrakis(barbital), 9-ethyladenine:5,5-diethylbarbituric acid, barbital:N'-(p-cyanophenyl)-N-(p-iodophenyl)melamine, barbital:2-amino-4-(m-bromophenylamino)-6-chloro-1,3,5-triazine, 5,5-diethylbarbituric acid:N,N'-diphenylmelamine, 5,5-diethylbarbituric acid:N,N'-bis(p-chlorophenyl)melamine, N,N'-bis(p-bromophenyl)melamine:5,5-diethylbarbituric acid, 5,5-diethylbarbituric acid:N,N'-bis(p-iodophenyl)melamine, 5,5-diethylbarbituric acid:N,N'-bis(p-tolyl)melamine, 5,5-diethylbarbituric acid:N,N'-bis(m-tolyl)melamine, 5,5-diethylbarbituric acid:N,N'-bis(m-chlorophenyl)melamine, N,N'-Bis(m-methylphenyl)melamine:barbital, N,N'-bis(m-chlorophenyl)melamine:barbital tetrahydrofuran solvate, 5,5-diethylbarbituric acid:N,N'-bis(t-butyl)melamine, 5,5-diethylbarbituric acid:N,N'-di(t-butyl)melamine, 6,6'-diquinolyl ether:5,5-diethylbarbituric acid, 5-t-butyl-2,4,6-triaminopyrimidine:diethylbarbituric acid, N,N'-bis(4-carboxymethylphenyl)melamine:barbital ethanol solvate, N,N'-bis(4-t-butylphenyl)melamine:barbital, tris(5,17-N,N'-bis(4-amino-6-(butylamino)-1,3,5-triazin-2-yl)diamino-11,23-dinitro-25,26,27,28-tetrapropoxycalix(4)arene):hexakis(diethylbarbituric acid) toluene solvate, N,N'-bis(m-fluorophenyl)melamine:barbital, N,N'-bis(m-bromophenyl)melamine:barbital acetone solvate, N,N'-bis(m-iodophenyl)melamine:barbital acetonitrile solvate, N,N'-bis(m-trifluoromethylphenyl)melamine:barbital acetonitrile solvate, aminopyrine:barbital, N,N'-bis(4-fluorophenyl)melamine:barbital, N,N'-bis(4-trifluoromethylphenyl)melamine:barbital, 2,4-diamino-5-(3,4,5-trimethoxybenzyl)pyrimidine:barbital, hydroxybutyrate:hydroxyvalerate, 2-aminopyrimidine:succinic acid, 1,3-bis(((6-methylpyrid-2-yl)amino)carbonyl)benzene:glutaric acid, 5-t-butyl-2,4,6-triaminopyrimidine:diethylbarbituric acid, bis(dithiobiuret-S,S')nickel(II):diuracil, platinum 3,3'-dihydroxymethyl-2,2'-bipyridine dichloride:AgF<sub>3</sub>CSO<sub>3</sub>, 4,4'-bipyridyl:isophthalic acid, 4,4'-bipyridyl:1,4-naphthalenedicarboxylic acid, 4,4'-bipyridyl:1,3,5-cyclohexanetricarboxylic acid, 4,4'-bipyridyl:tricaballylic acid, urotropin:azelaic acid, insulin:C8-HI (octanoyl-N<sup>e</sup>-LysB29-human insulin), isonicotinamide:cinnamic acid, isonicotinamide:3-hydroxybenzoic acid, isonicotinamide:3-N,N-dimethylaminobenzoic acid, isonicotinamide:3,5-bis(trifluoromethyl)-benzoic acid, isonicotinamide:d,l-mandelic acid,

isonicotinamide:chloroacetic acid, isonicotinamide:fumaric acid monoethyl ester, isonicotinamide:12-bromododecanoic acid, isonicotinamide:fumaric acid, isonicotinamide:succinic acid, isonicotinamide:4-ketopimelic acid, isonicotinamide:thiodiglycolic acid, 1,3,5-cyclohexane-tricarboxylic acid:hexamethyltetramine, 1,3,5-cyclohexane-tricarboxylic acid:4,7-phenanthroline, 4,7-phenanthroline:oxalic acid, 4,7-phenanthroline:terephthalic acid, 4,7-phenanthroline: 1,3,5-cyclohexane-tricarboxylic acid, 4,7-phenanthroline:1,4-naphthalenedicarboxylic acid, pyrazine:methanoic acid, pyrazine:ethanoic acid, pyrazine:propanoic acid, pyrazine:butanoic acid, pyrazine:pentanoic acid, pyrazine:hexanoic acid, pyrazine:heptanoic acid, pyrazine:octanoic acid, pyrazine:nonanoic acid, pyrazine:decanoic acid, diammine-(deoxy-quanyl-quanyl-N<sup>7</sup>,N<sup>7</sup>)-platinum:tris(glycine) hydrate, 2-aminopyrimidine:p-phenylenediacetic acid, bis(2-aminopyrimidin-1-ium)fumarate:fumaric acid, 2-aminopyrimidine:indole-3-acetic acid, 2-aminopyrimidine:N-methylpyrrole-2-carboxylic acid, 2-aminopyrimidine:thiophen-2-carboxylic acid, 2-aminopyrimidine:(+)-camphoric acid, 2,4,6-Trinitrobenzoic acid: 2-aminopyrimidine, 2-aminopyrimidine:4-aminobenzoic acid, 2-aminopyrimidine:bis(phenoxyacetic acid), 2-aminopyrimidine:(2,4-dichlorophenoxy)acetic acid, 2-aminopyrimidine:(3,4-dichlorophenoxy)acetic acid, 2-aminopyrimidine:indole-2-carboxylic acid, 2-aminopyrimidine:terephthalic acid, 2-aminopyrimidine:bis(2-nitrobenzoic acid), 2-aminopyrimidine:bis(2-aminobenzoic acid), 2-aminopyrimidine:3-aminobenzoic acid, 2-hexeneoic acid:isonicotinamide, 4-nitrobenzoic acid:isonicotinamide, 3,5-dinitrobenzoic acid:isonicotinamide:4-methylbenzoic acid, 2-amino-5-nitropyrimidine:2-amino-3-nitropyridine, 3,5-dinitrobenzoic acid:4-chlorobenzamide, 3-dimethylaminobenzoic acid:4-chlorobenzamide, fumaric acid:4-chlorobenzamide, oxine:4-nitrobenzoic acid, oxine:3,5-dinitrobenzoic acid, oxine:3,5-dinitrosalicylic acid, 3-[2-(N',N'-dimethylhydrazino)-4-thiazolylmethylthio]-N<sup>2</sup>-sulfamoylpropionamide:maleic acid, 5-fluorouracil:9-ethylhypoxanthine, 5-fluorouracil:cytosine dihydrate, 5-fluorouracil:theophylline monohydrate, stearic acid:nicotinamide, cis-1-{[4-(1-imidazolylmethyl)cyclohexyl]methyl}imidazole:succinic acid, CGS18320B:succinic acid, sulfaproxyline:caffeine, 4-aminobenzoic acid:4-aminobenzonitrile, 3,5-dinitrobenzoic acid:isonicotinamide:3-methylbenzoic acid, 3,5-dinitrobenzoic acid:isonicotinamide:4-(dimethylamino)benzoic acid, 3,5-dinitrobenzoic acid:isonicotinamide:4-hydroxy-3-methoxycinnamic acid, isonicotinamide:oxalic acid, isonicotinamide:malonic acid, isonicotinamide:succinic acid, isonicotinamide:glutaric acid, isonicotinamide:adipic acid, benzoic acid:isonicotinamide, mazapertine:succinate, betaine:dichloronitrophenol,

betainepyridine:dichloronitrophenol, betainepyridine:pentachlorophenol, 4-{2-[1-(2-hydroxyethyl)-4-pyridylidene]-ethylidene}-cyclo-hexa-2,5-dien-1-one:methyl 2,4-dihydroxybenzoate, 4-{2-[1-(2-hydroxyethyl)-4-pyridylidene]-ethylidene}-cyclo-hexa-2,5-dien-1-one:2,4-dihydroxypropiophenone, 4-{2-[1-(2-hydroxyethyl)-4-pyridylidene]-ethylidene}-cyclo-hexa-2,5-dien-1-one:2,4-dihydroxyacetophenone, squaric acid:4,4'-dipyridylacetylene, squaric acid:1,2-bis(4-pyridyl)ethylene, chloranilic acid:1,4-bis[(4-pyridyl)ethynyl]benzene, 4,4'-bipyridine:phthalic acid, 4,4'-dipyridylacetylene:phthalic acid, bis(pentamethylcyclopentadienyl)iron:bromanilic acid, bis(pentamethylcyclopentadienyl)iron:chloranilic acid, bis(pentamethylcyclopentadienyl)iron:cyananilic acid, pyrazinotetrathiafulvalene:chloranilic acid, phenol:pentafluorophenol, co-crystals of itraconazole, and co-crystals of topiramate.

### Abstract

A pharmaceutical composition comprising a co-crystal of an API and a co-crystal forming compound; wherein the API has at least one functional group selected from ether, thioether, alcohol, thiol, aldehyde, ketone, thioketone, nitrate ester, phosphate ester, thiophosphate ester, ester, thioester, sulfate ester, carboxylic acid, phosphonic acid, phosphinic acid, sulfonic acid, amide, primary amine, secondary amine, ammonia, tertiary amine, sp<sup>2</sup> amine, thiocyanate, cyanamide, oxime, nitrile diazo, organohalide, nitro, s-heterocyclic ring, thiophene, n-heterocyclic ring, pyrrole, o-heterocyclic ring, furan, epoxide, peroxide, hydroxamic acid, imidazole, pyridine and the co-crystal forming compound has at least one functional group selected from amine, amide, pyridine, imidazole, indole, pyrrolidine, carbonyl, carboxyl, hydroxyl, phenol, sulfone, sulfonyl, mercapto and methyl thio, such that the API and co-crystal forming compound are capable of co-crystallizing from a solution phase under crystallization conditions.

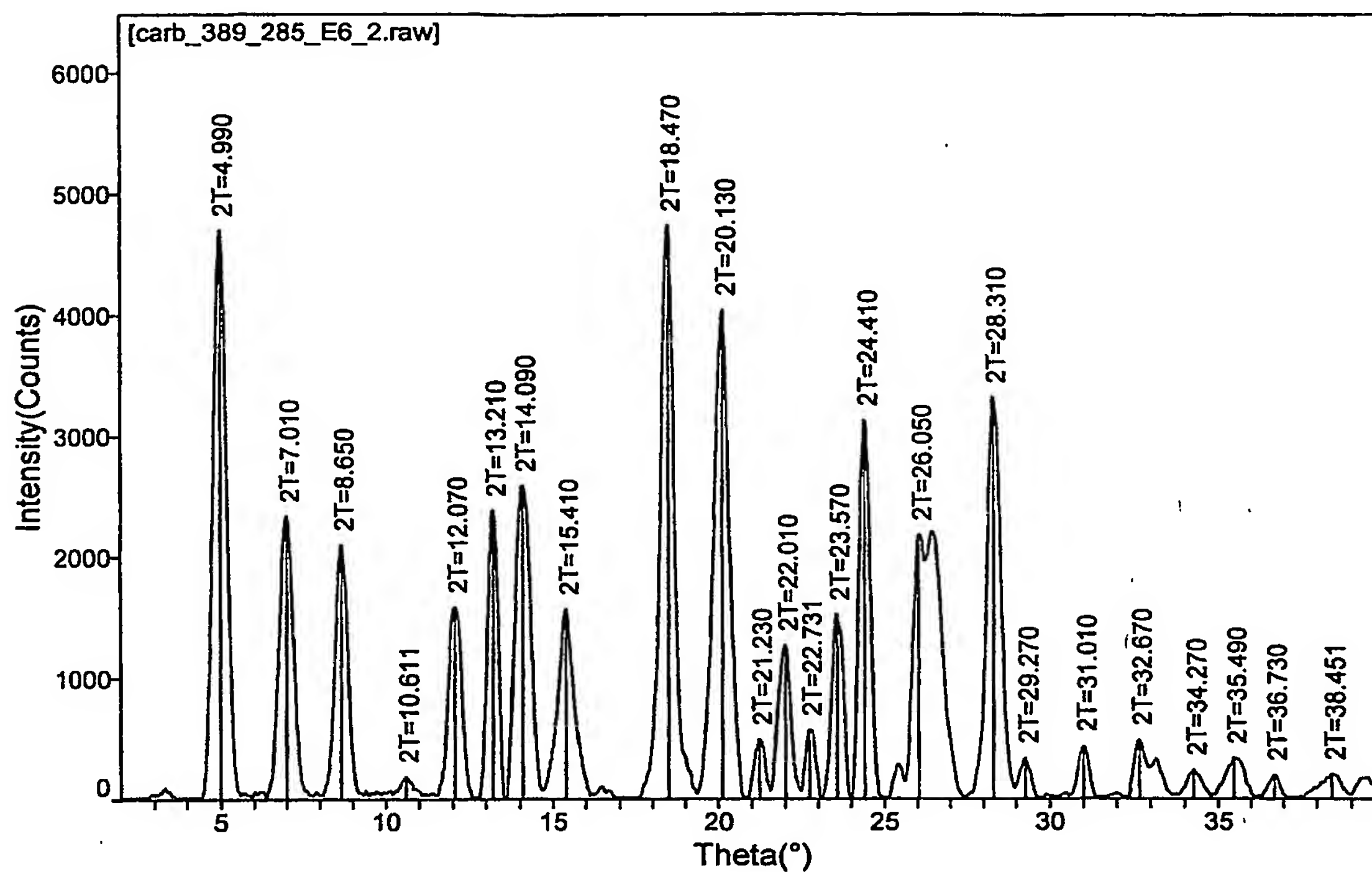


Figure 1

Sample: carb\_389\_285E6  
Size: 0.1440 mg  
Method: Ramp

DSC

File: Y:\carb\_389\_285E6.001  
Operator: MBH  
Run Date: 03-Dec-02 10:43  
Instrument: DSC Q1000 V6.19 Build 227

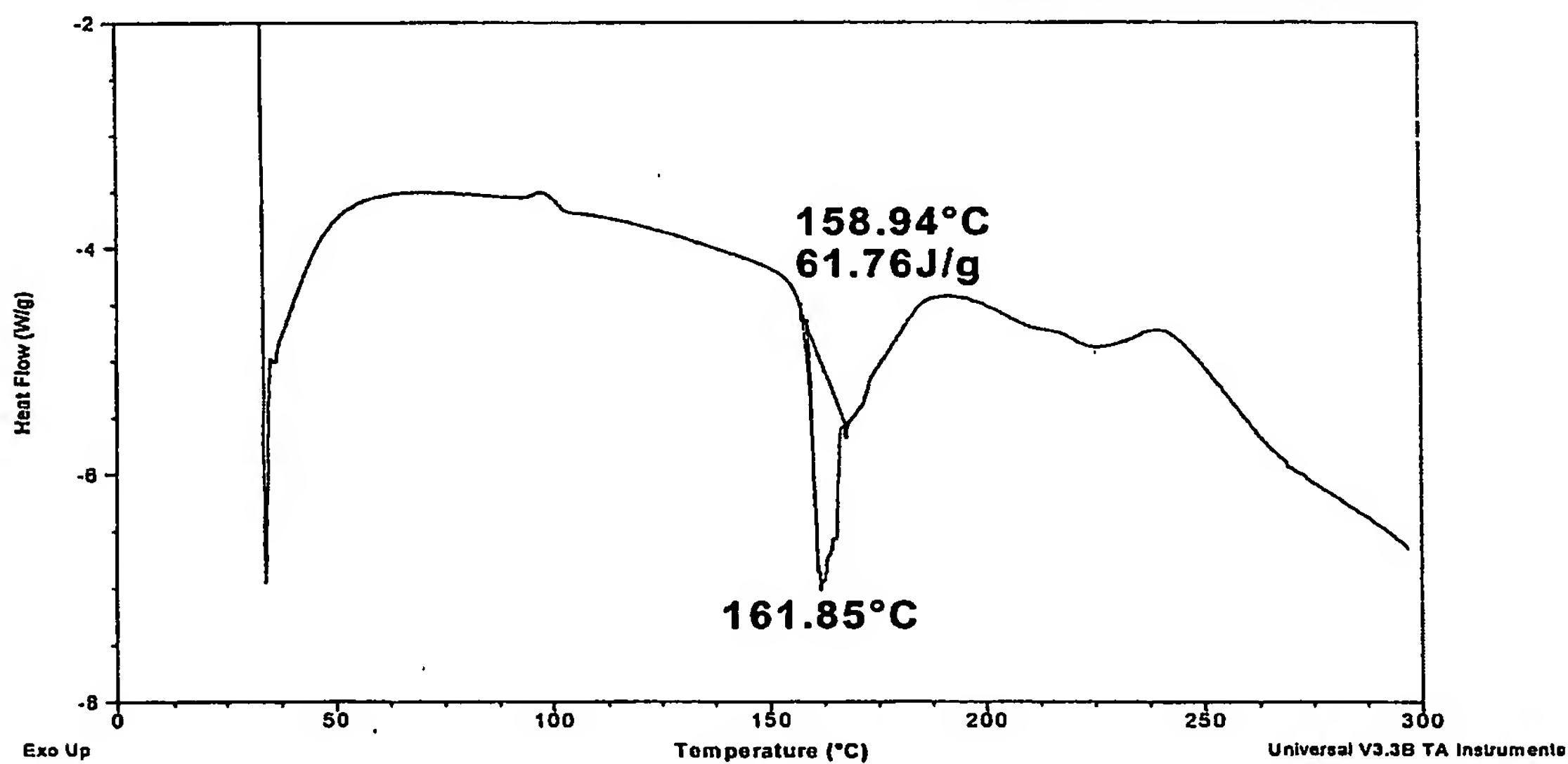


Figure 2

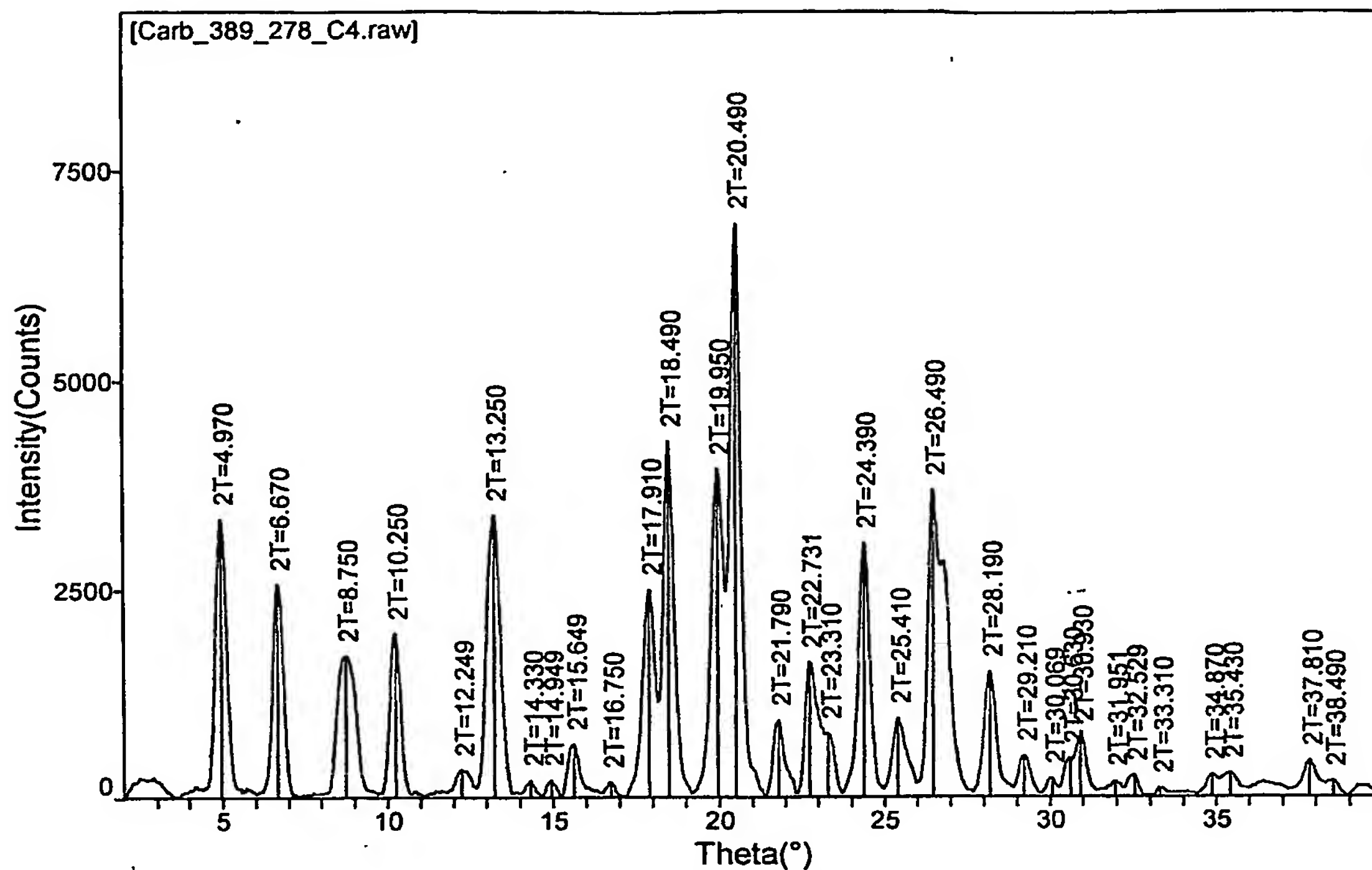


Figure 3

Sample: carb\_389\_278\_C4  
Size: 0.1340 mg  
Method: Ramp

DSC

File: Y:\Carb\_389\_278\carb\_389\_278\_C4.001  
Operator: MBH  
Run Date: 18-Nov-02 16:40  
Instrument: DSC Q1000 V6.19 Build 227

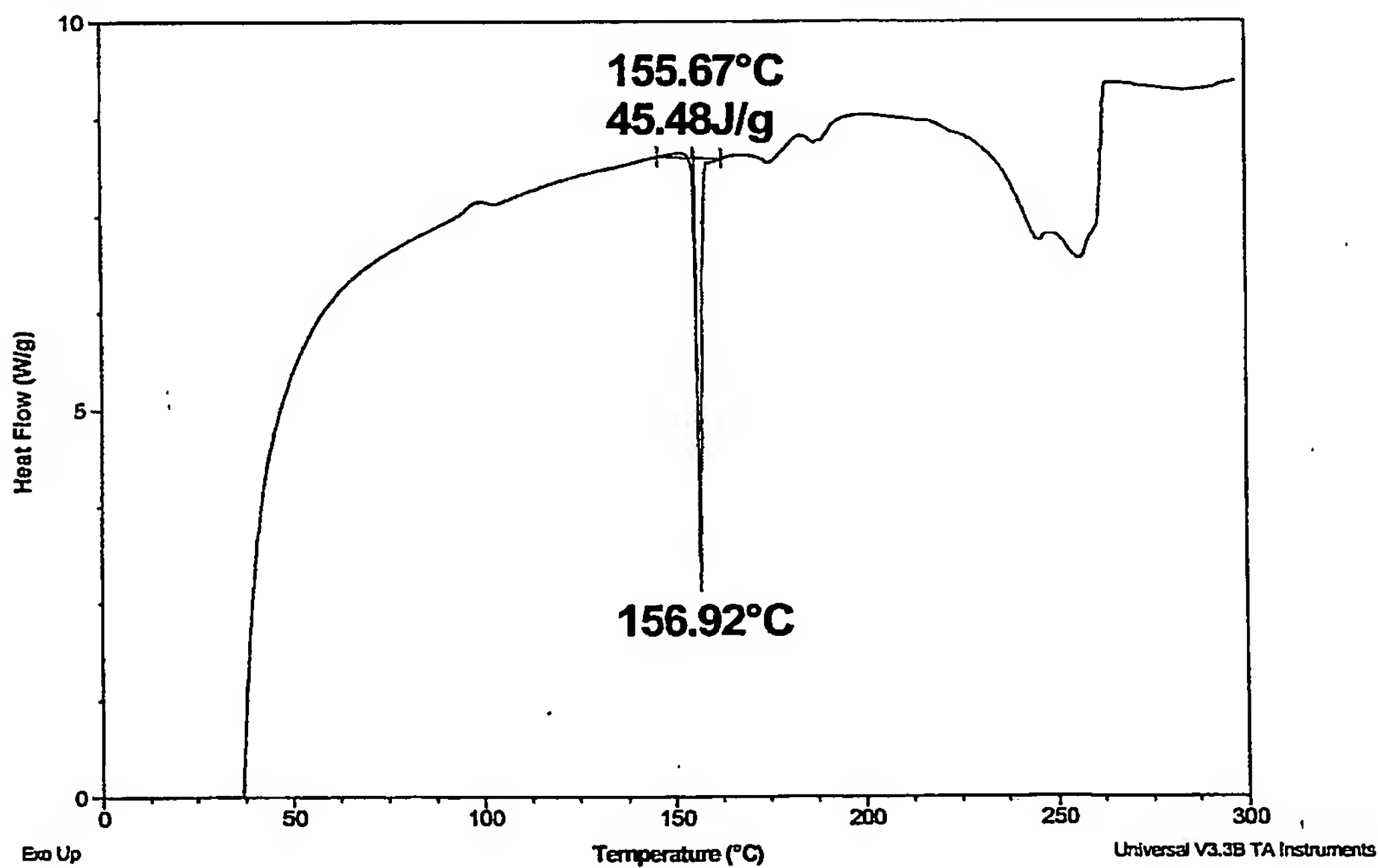


Figure 4



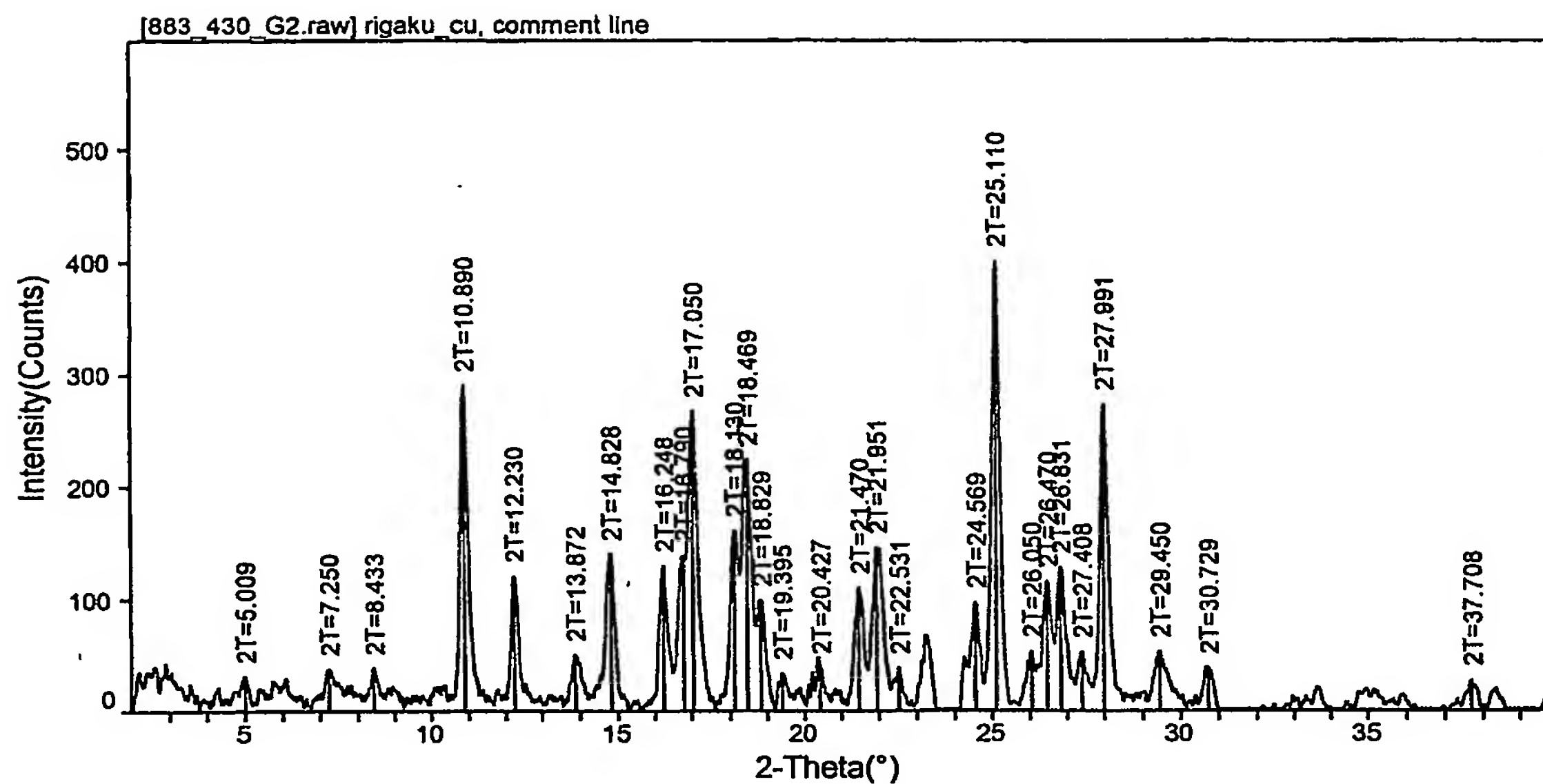


Figure 5

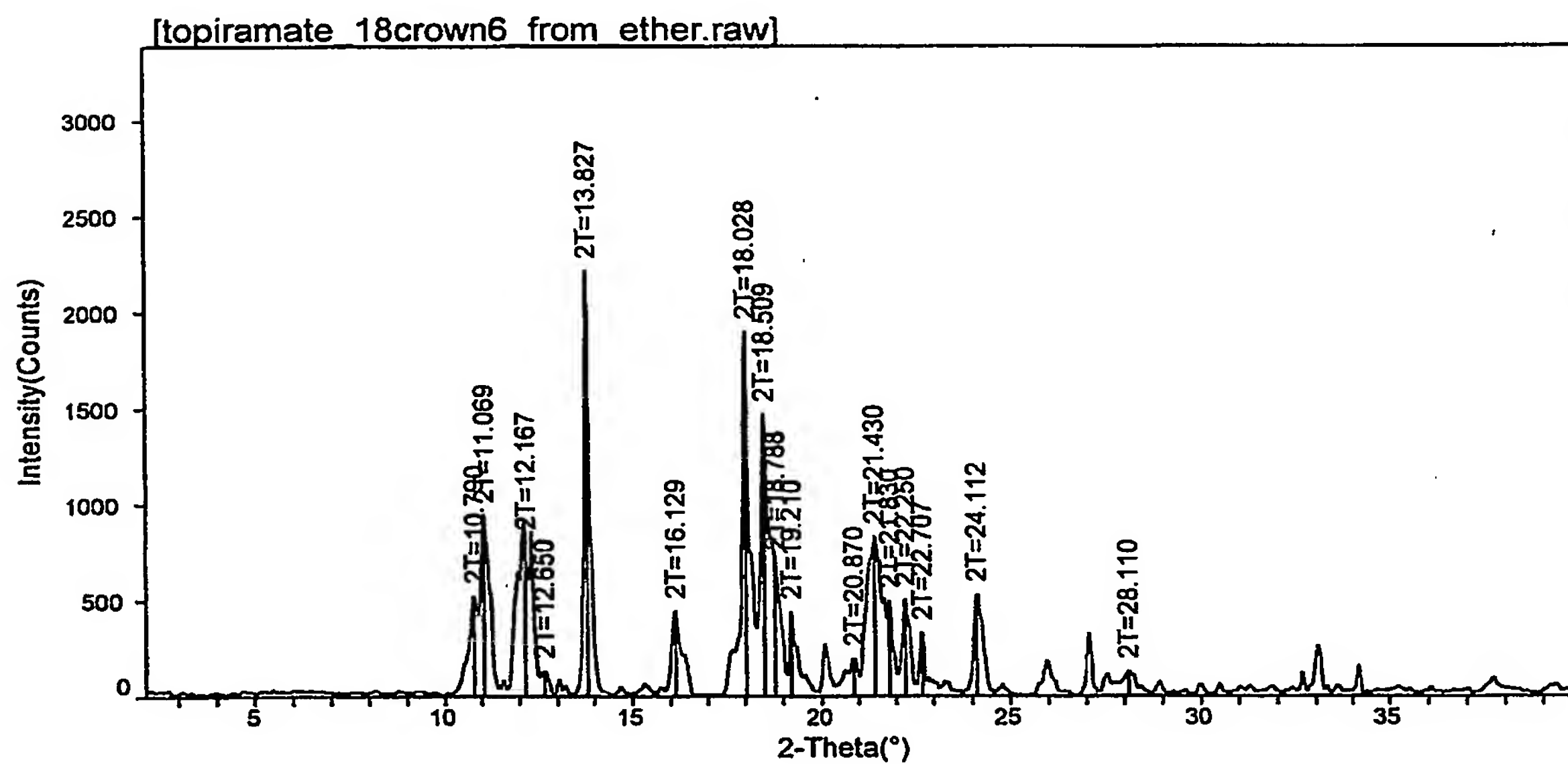


Figure 6

Sample: topiramate\_18crown6  
Size: 0.8210 mg  
Method: Ramp

DSC

File: Y:\DSC\Magali\topiramate\_18crown6.001  
Operator: MBH  
Run Date: 19-May-03 05:35  
Instrument: DSC Q1000 V6.19 Build 227

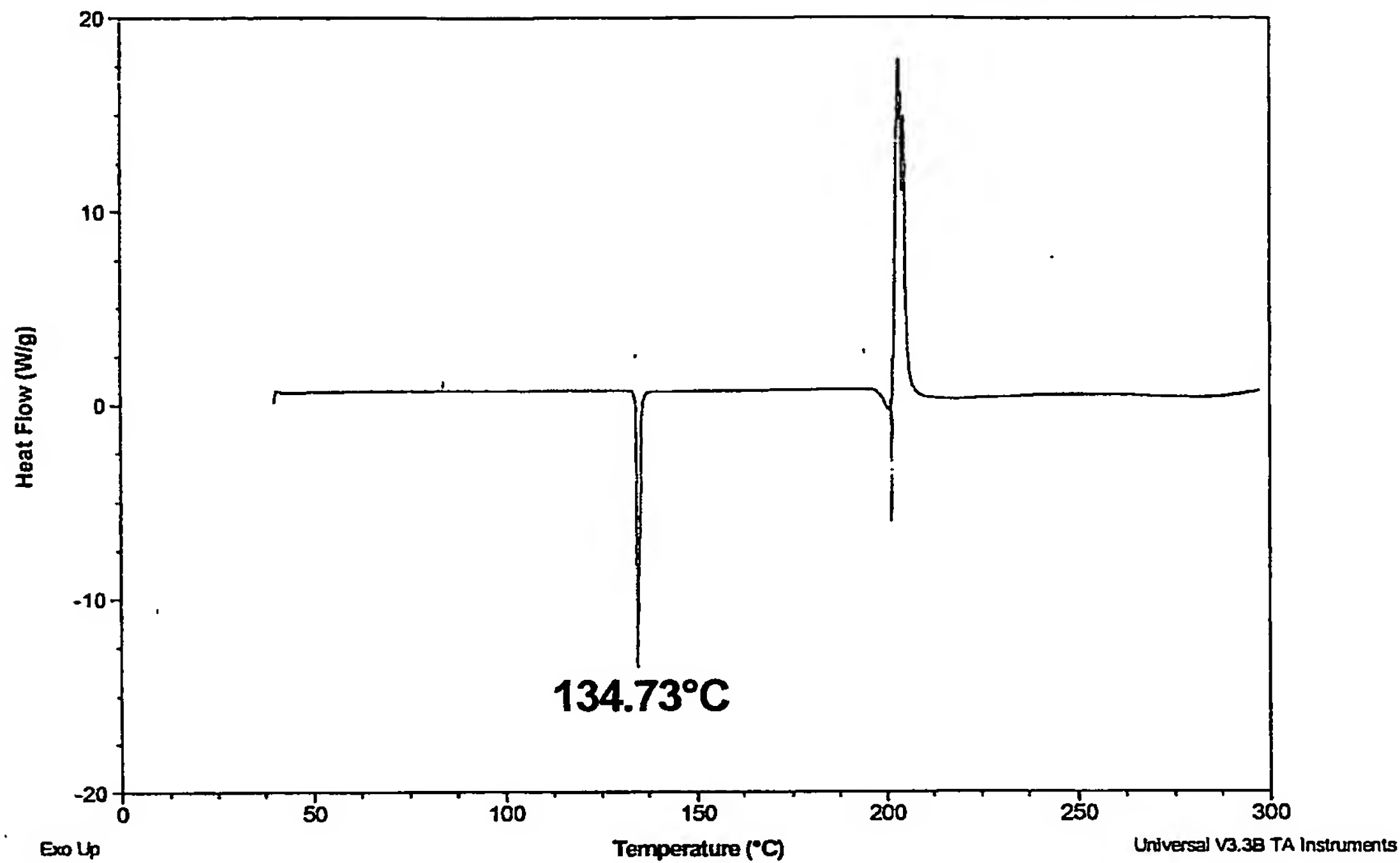


Figure 7

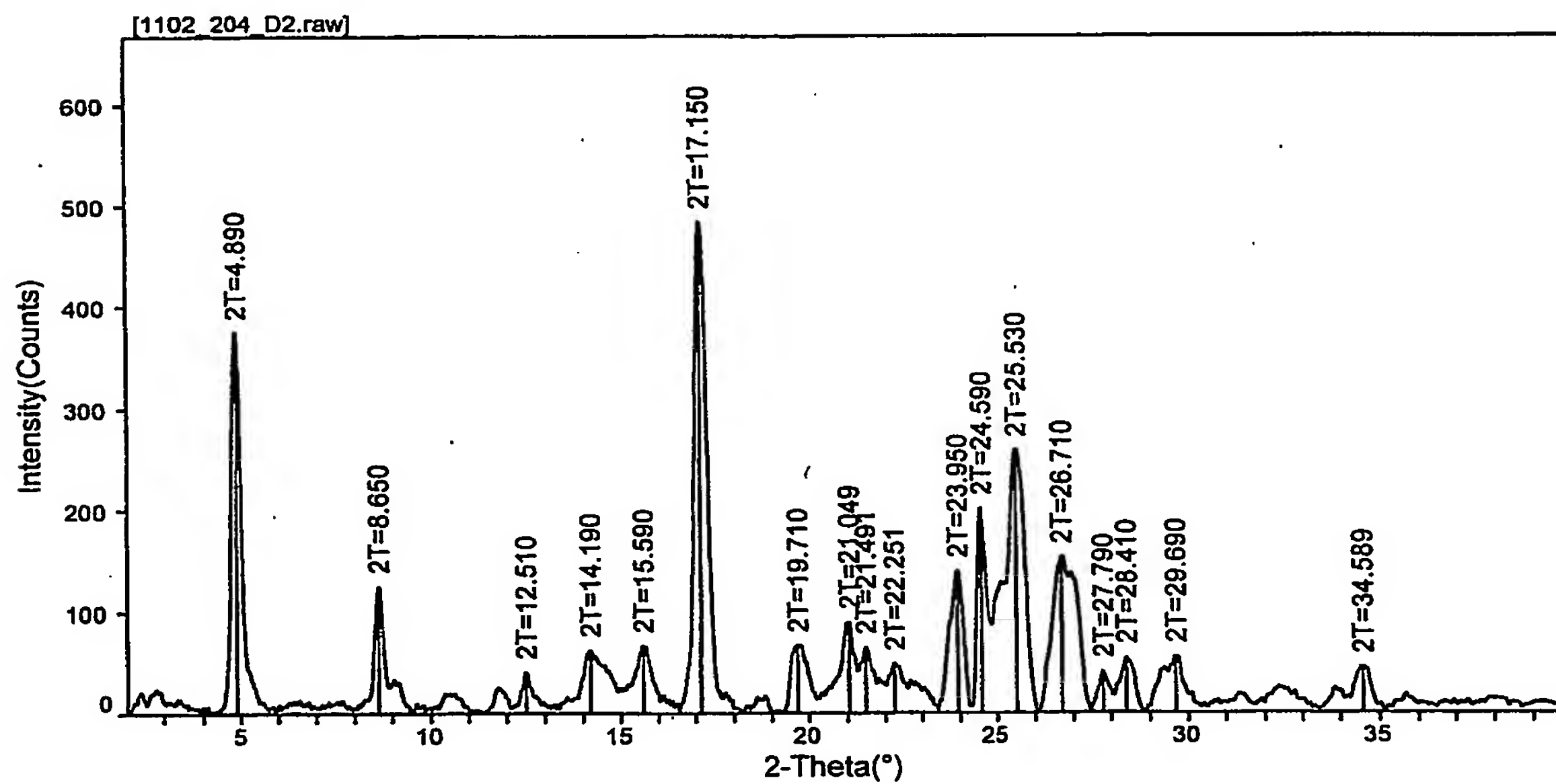


Figure 8

Sample: 1102\_204\_D2  
Size: 0.7500 mg  
Method: Ramp

DSC

File: Y:\Olenzapine\1102\1102\_204\_D2.002  
Operator: MBH  
Run Date: 14-May-03 08:58  
Instrument: DSC Q1000 V6.19 Build 227

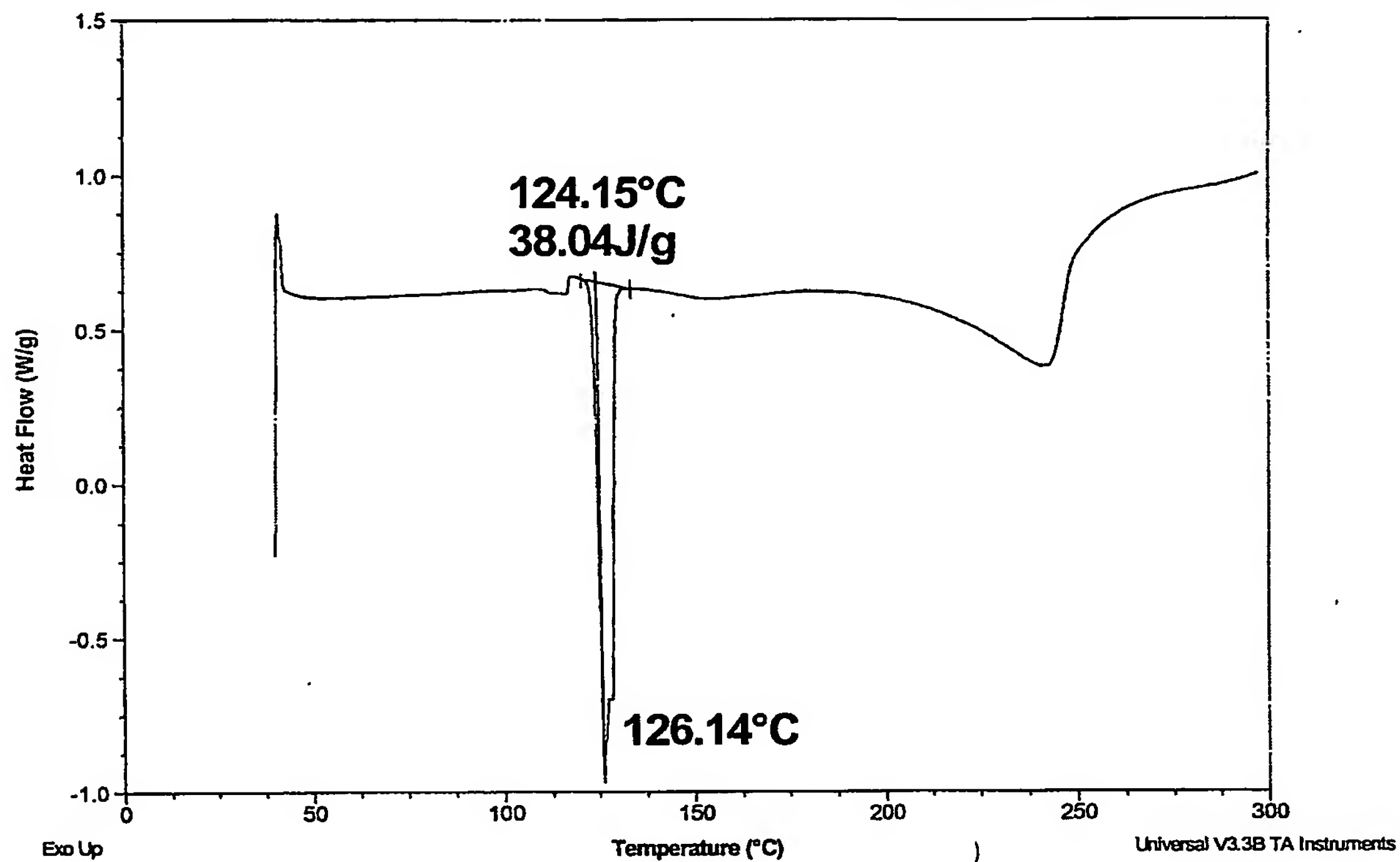


Figure 9

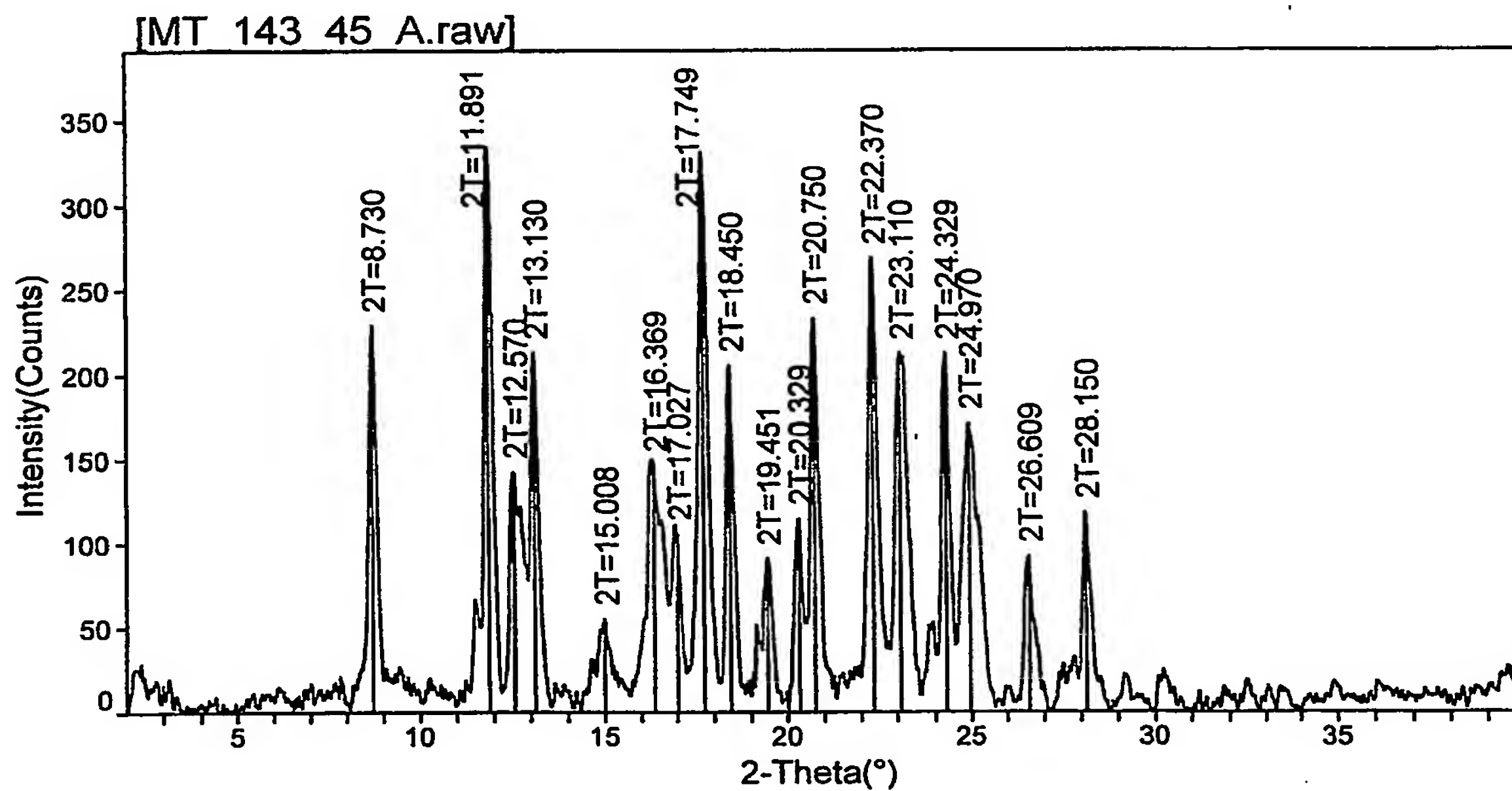


Figure 10

#CT-10503/27778

Sample: Celecoxib/18-crown-8  
Size: 0.9800 mg  
Method: Ramp

DSC

File: \\...MT\_143\_45\_A; Celecoxib 18-C-6.001  
Operator: MDT  
Run Date: 17-Mar-03 13:42  
Instrument: DSC Q1000 V6.19 Build 227

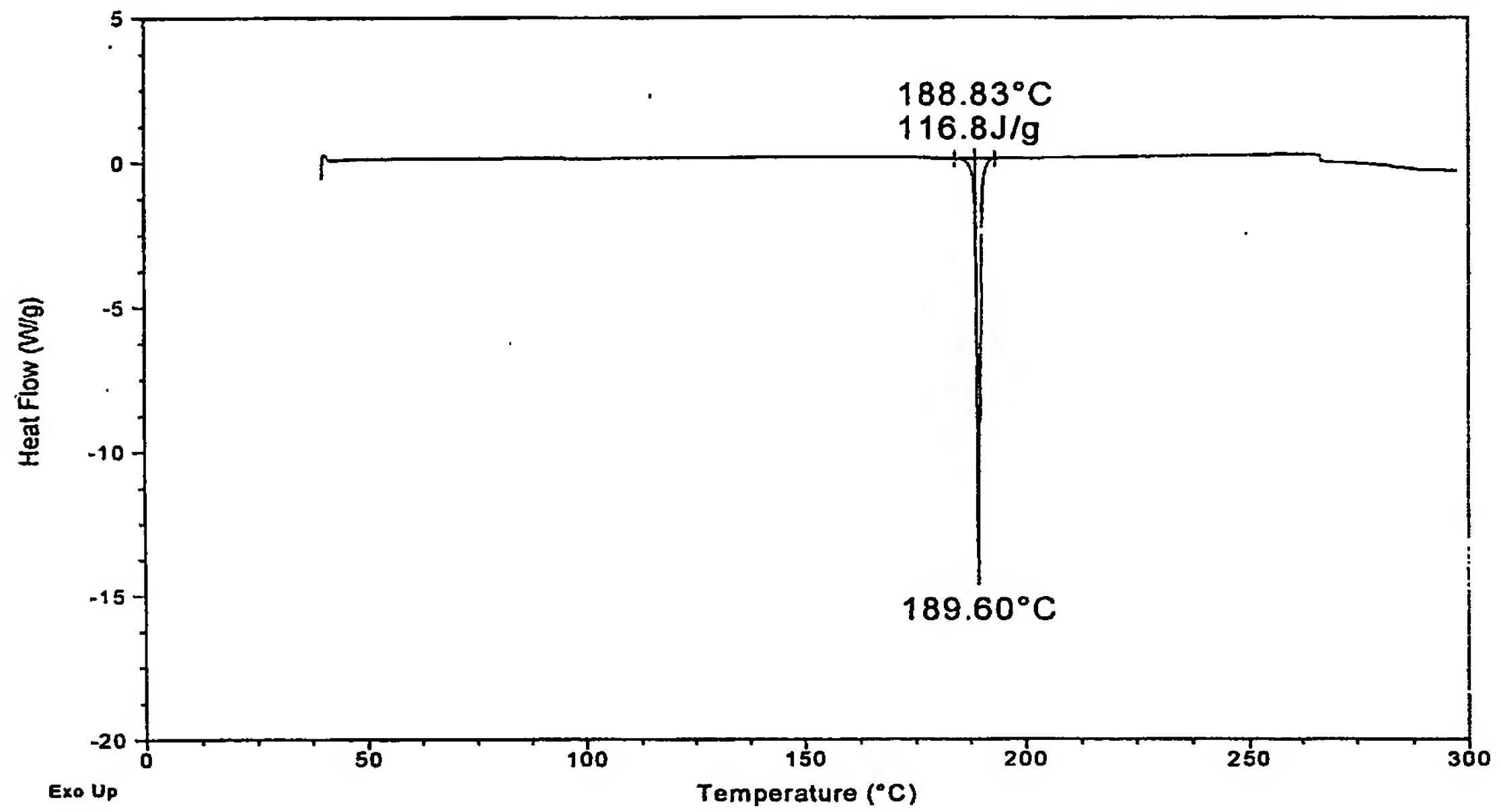


Figure 11

TransForm Pharmaceuticals, Inc.

[D:\MAXRAPID\Administrator\c\data\ Monday, Jul 08, 2002 08:17a (MDU\JADES)

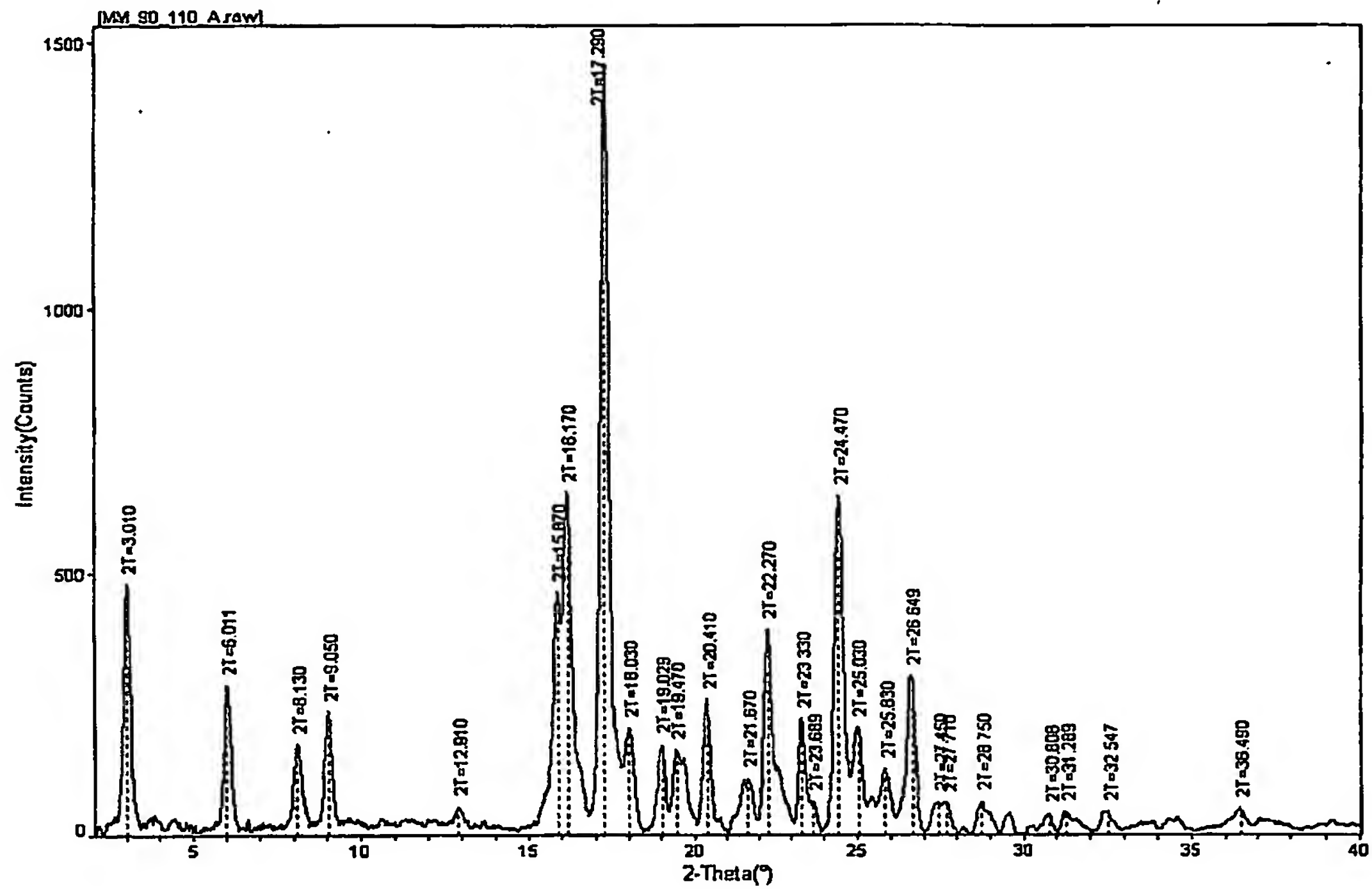


Figure 12

Sample: MM\_90\_110\_A  
Size: 1.8060 mg  
Method: Ramp

DSC

File: \\...Utraconazole\MM\_90\_110\_A.001  
Operator: MM  
Run Date: 08-Jul-02 08:11  
Instrument: DSC Q1000 V5.1 Build 191

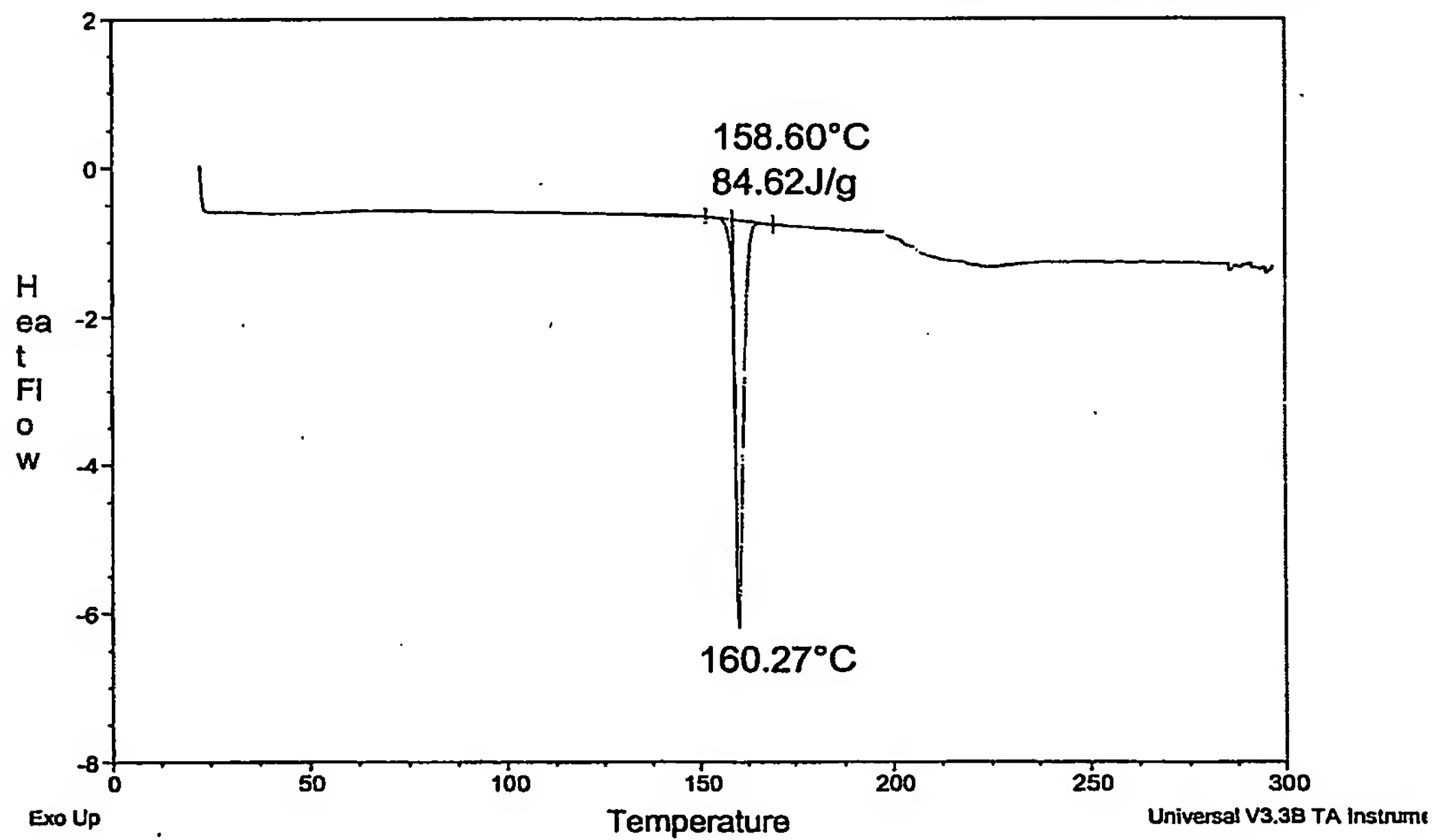


Figure 13

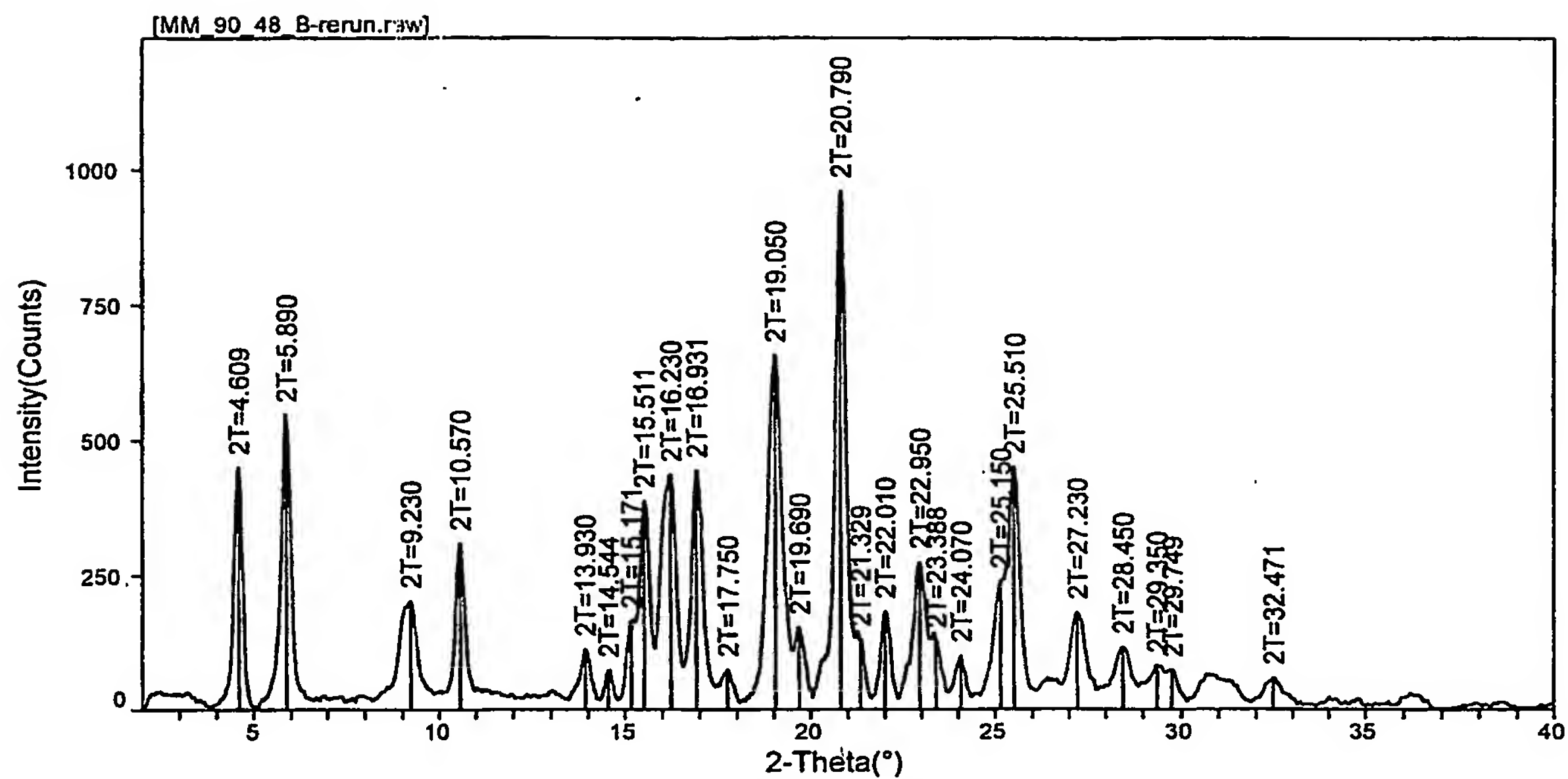


Figure 14

Sample: MM\_90\_48\_B\_DSC  
Size: 2.3690 mg  
Method: Ramp

DSC

File: \\...\\JR\_81\_53\_D\_Mg\_open\_DSC.004  
Operator: MM  
Run Date: 11-Jun-02 10:46  
Instrument: DSC Q1000 V5.1 Build 191

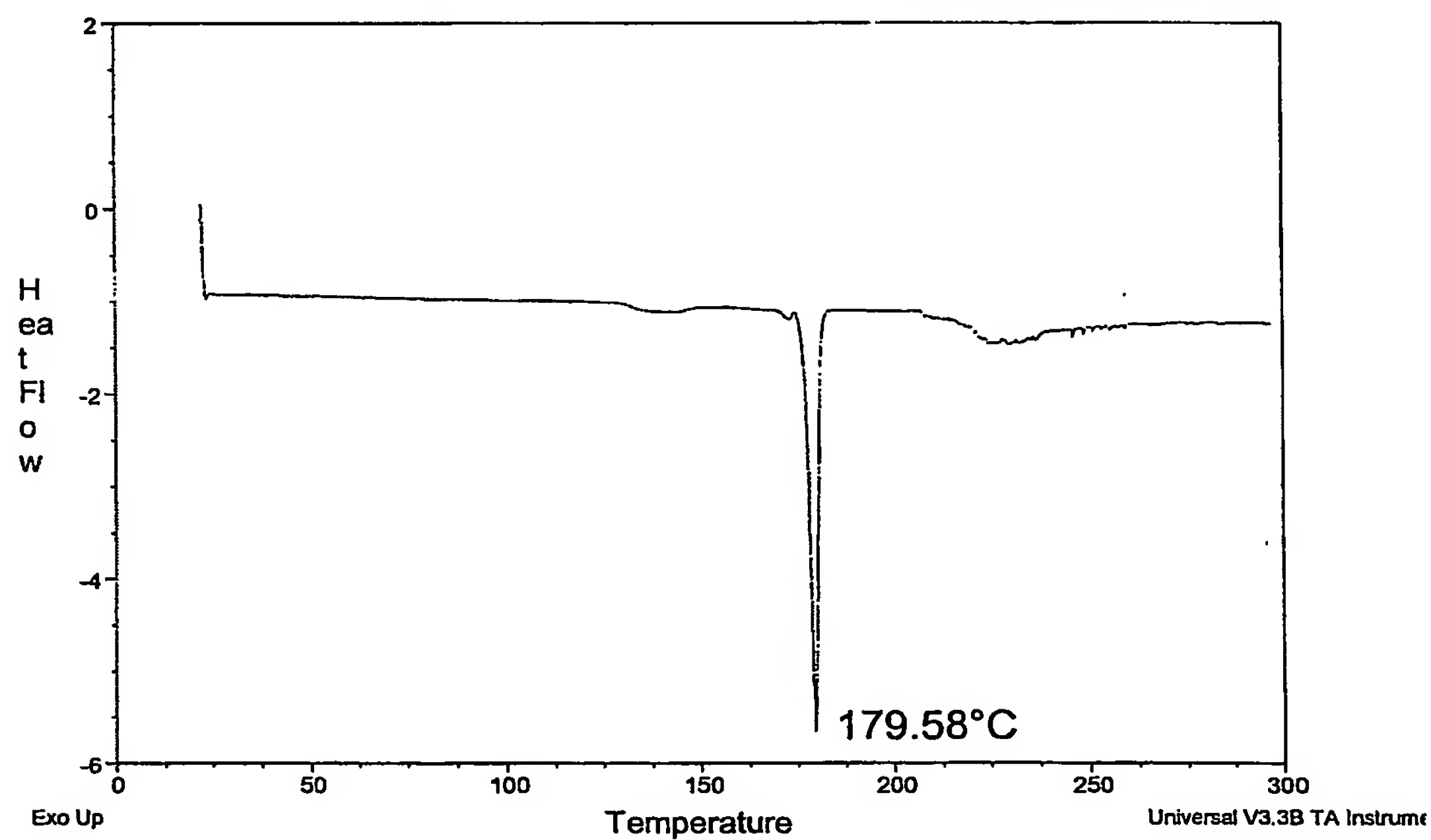


Figure 15



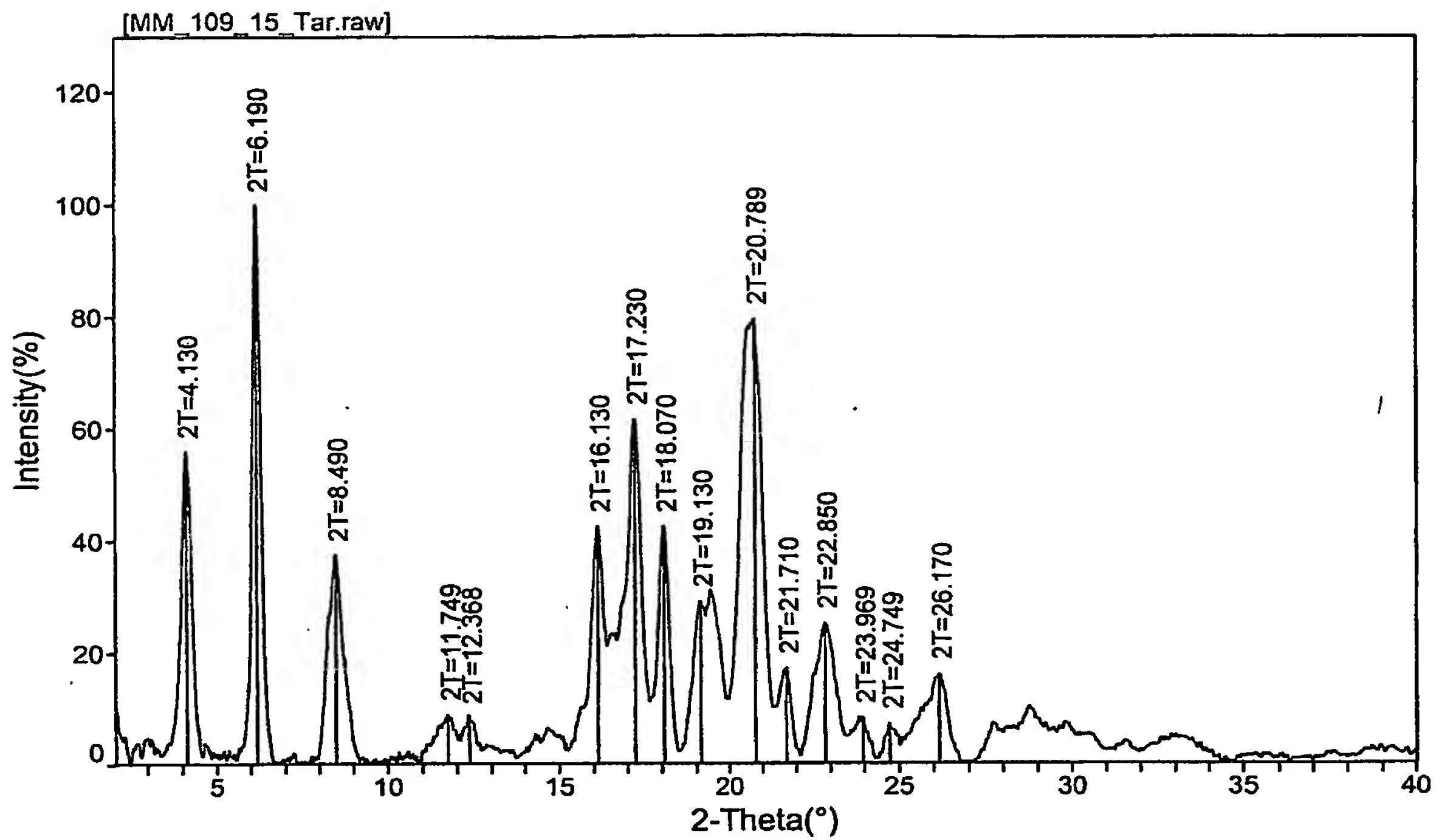


Figure 16

Sample: MM\_109\_15\_Tar  
Size: 1.8790 mg  
Method: Ramp

DSC

File: \\...Ultrasonozole\MM\_109\_15\_Tar.001  
Operator: MM  
Run Date: 01-Aug-02 15:15  
Instrument: DSC Q1000 V5.1 Build 191

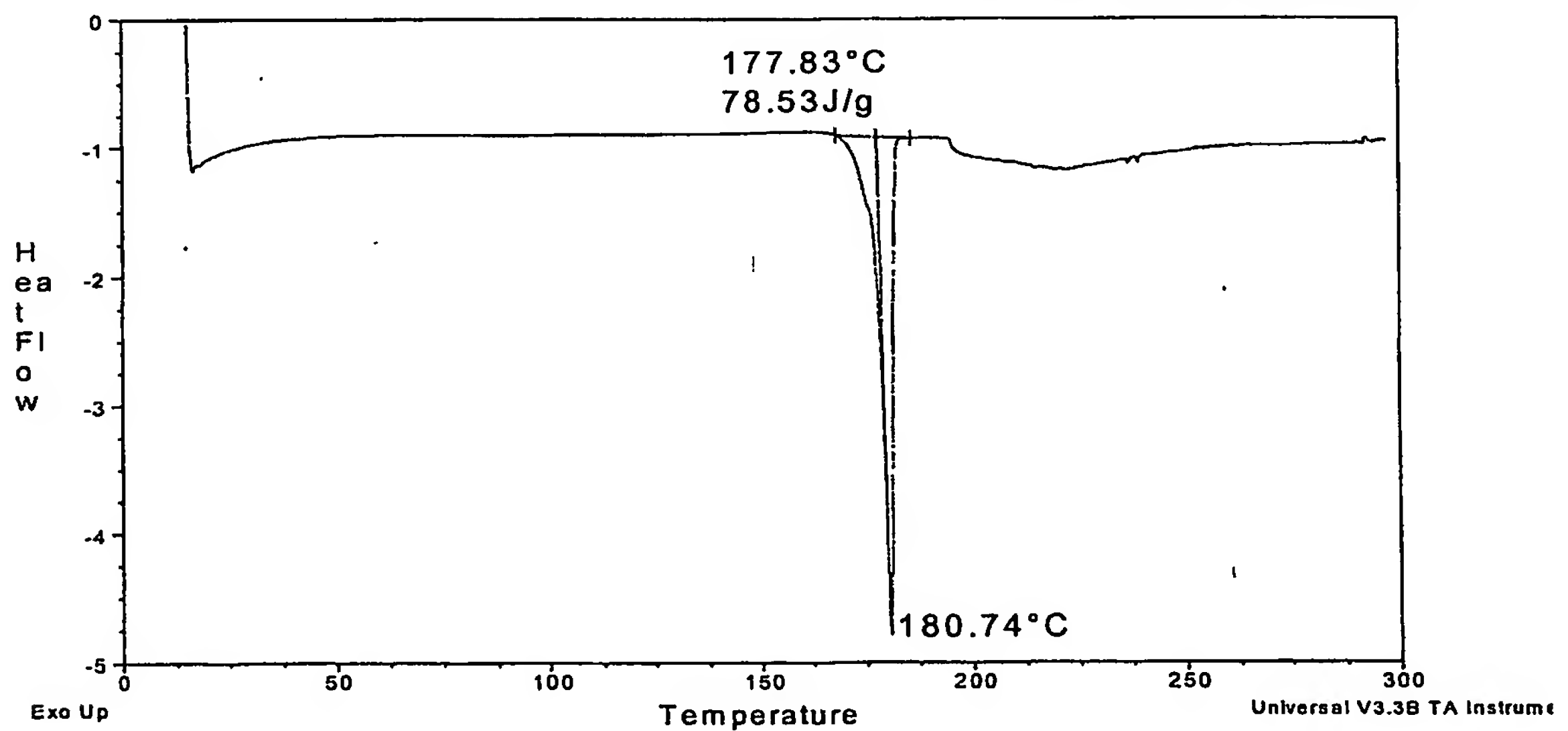


Figure 17

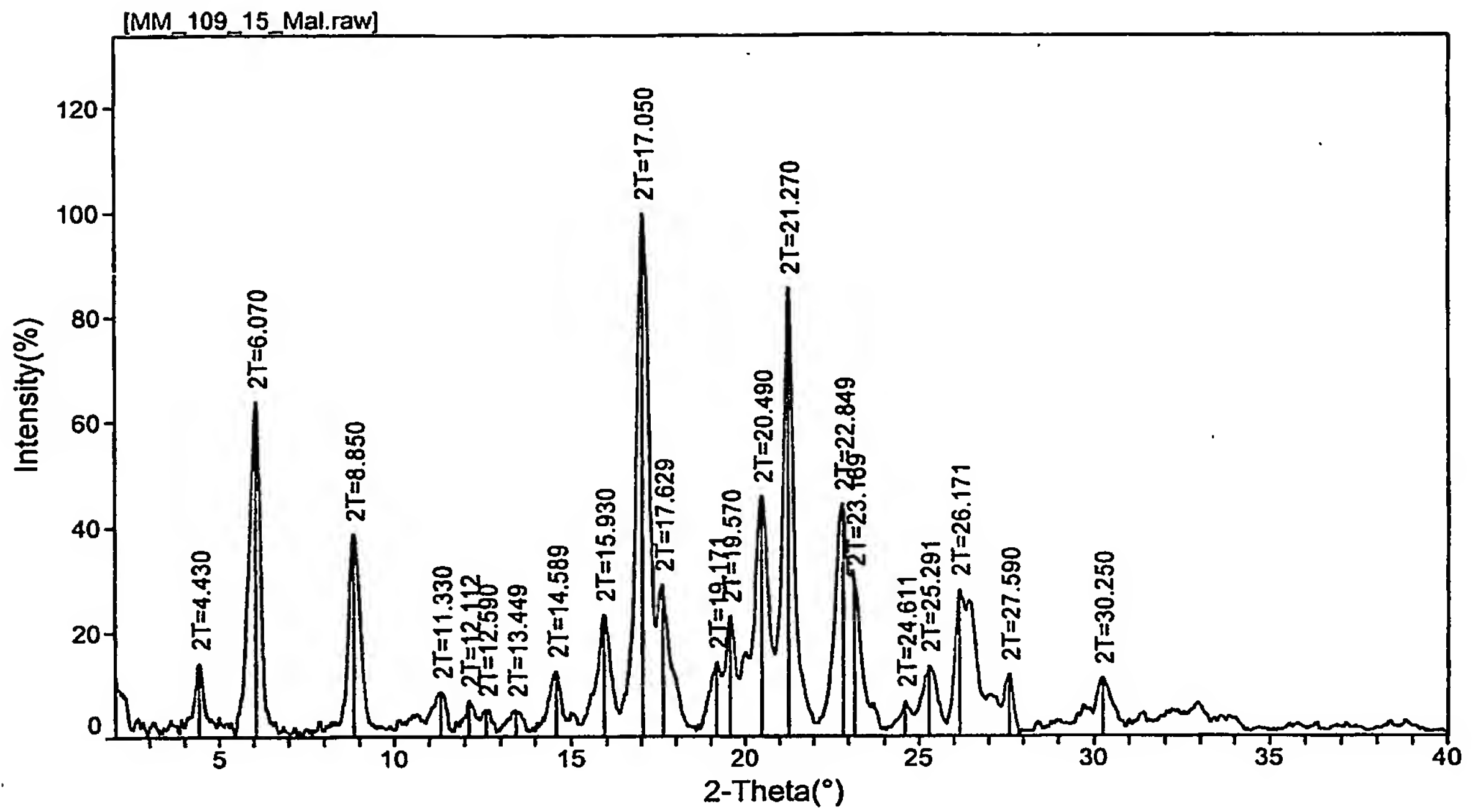


Figure 18

Sample: MM\_109\_15\_Tar  
Size: 1.2140 mg  
Method: Ramp

DSC

File: Y:\...Ultraconazole\MM\_109\_15\_Mal.001  
Operator: MM  
Run Date: 01-Aug-02 14:18  
Instrument: DSC Q1000 V5.1 Build 191

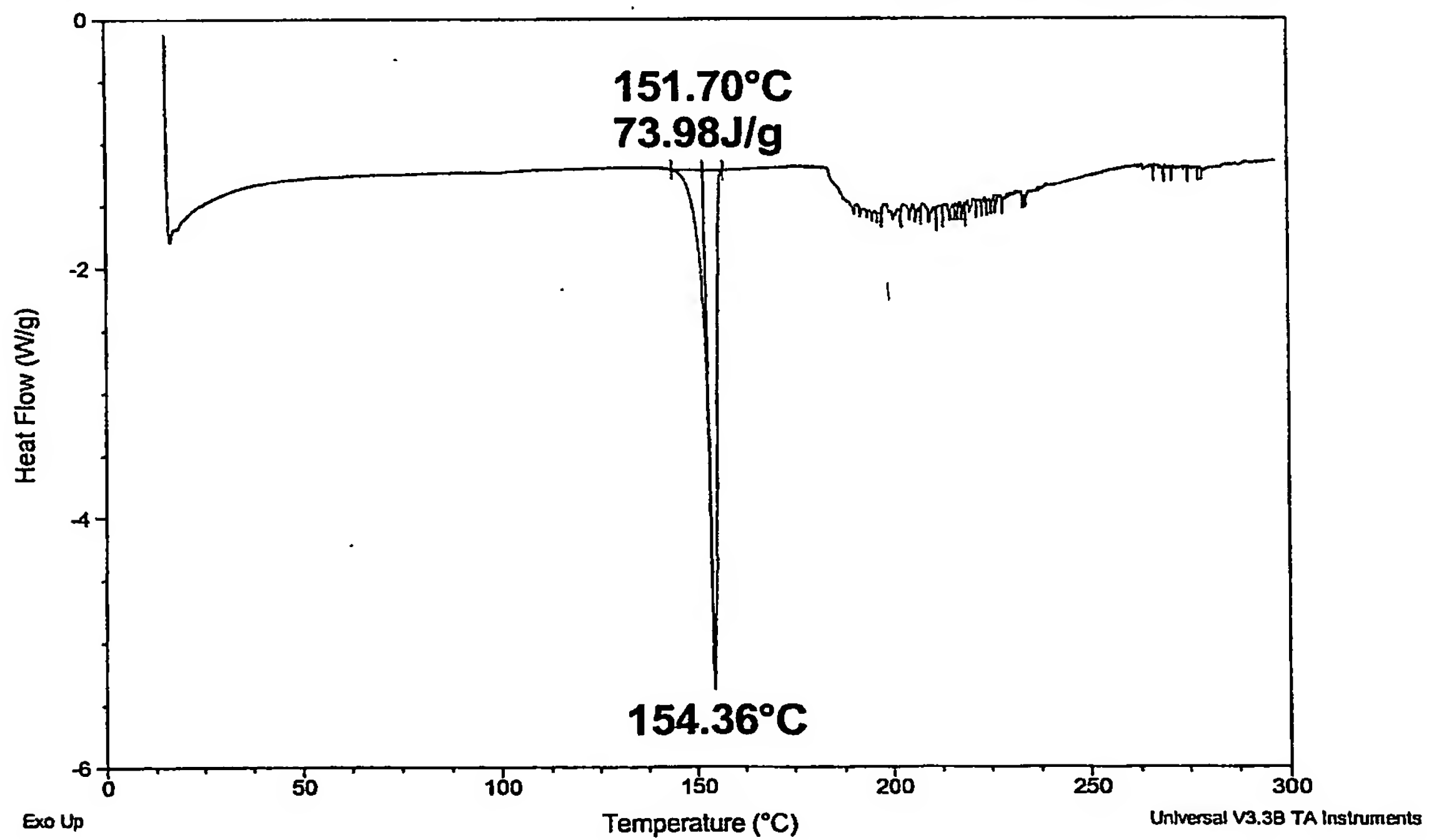


Figure 19

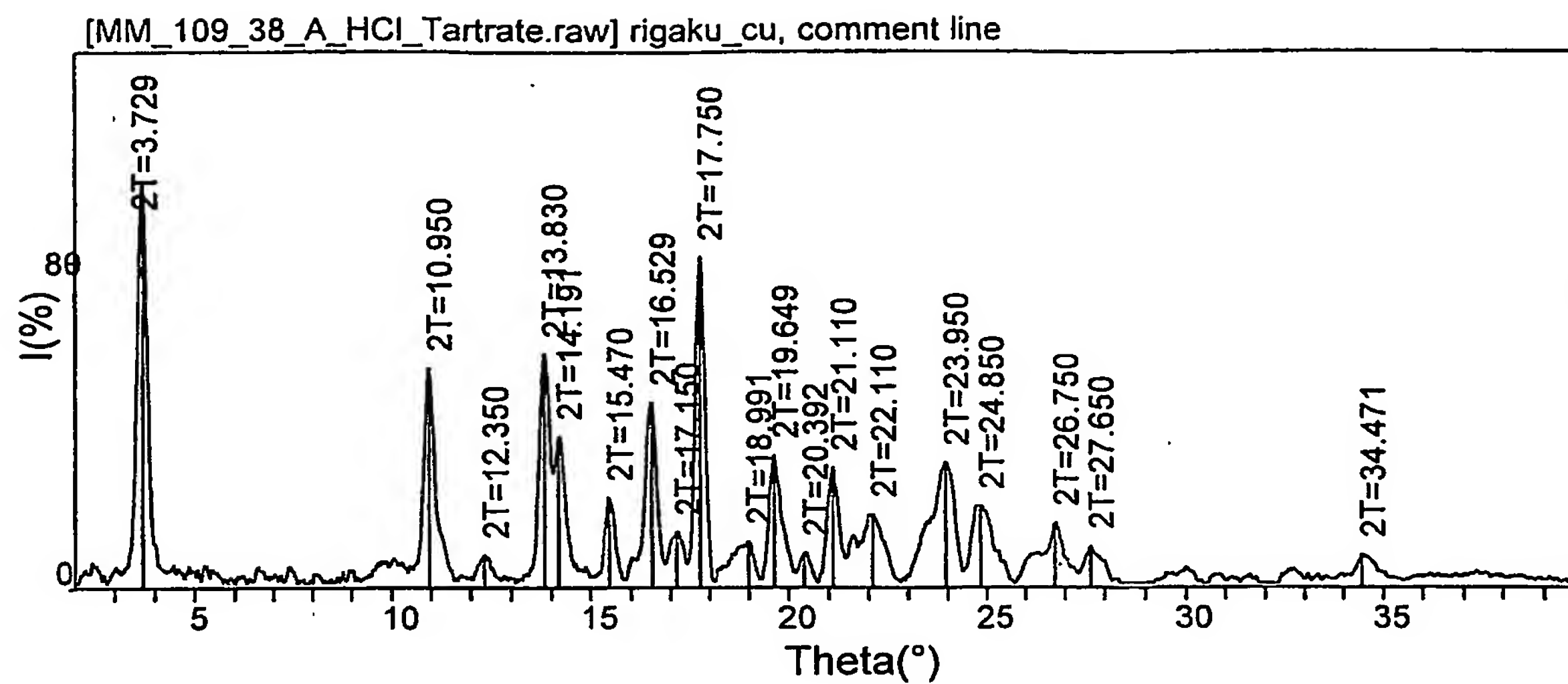


Figure 20

Sample: MM\_109\_38\_A  
Size: 1.5080 mg  
Method: Ramp

DSC

File: \\...UltraconazoleMM\_109\_38\_A.001  
Operator: MM  
Run Date: 11-Sep-02 10:57  
Instrument: DSC Q1000 V6.19 Build 227

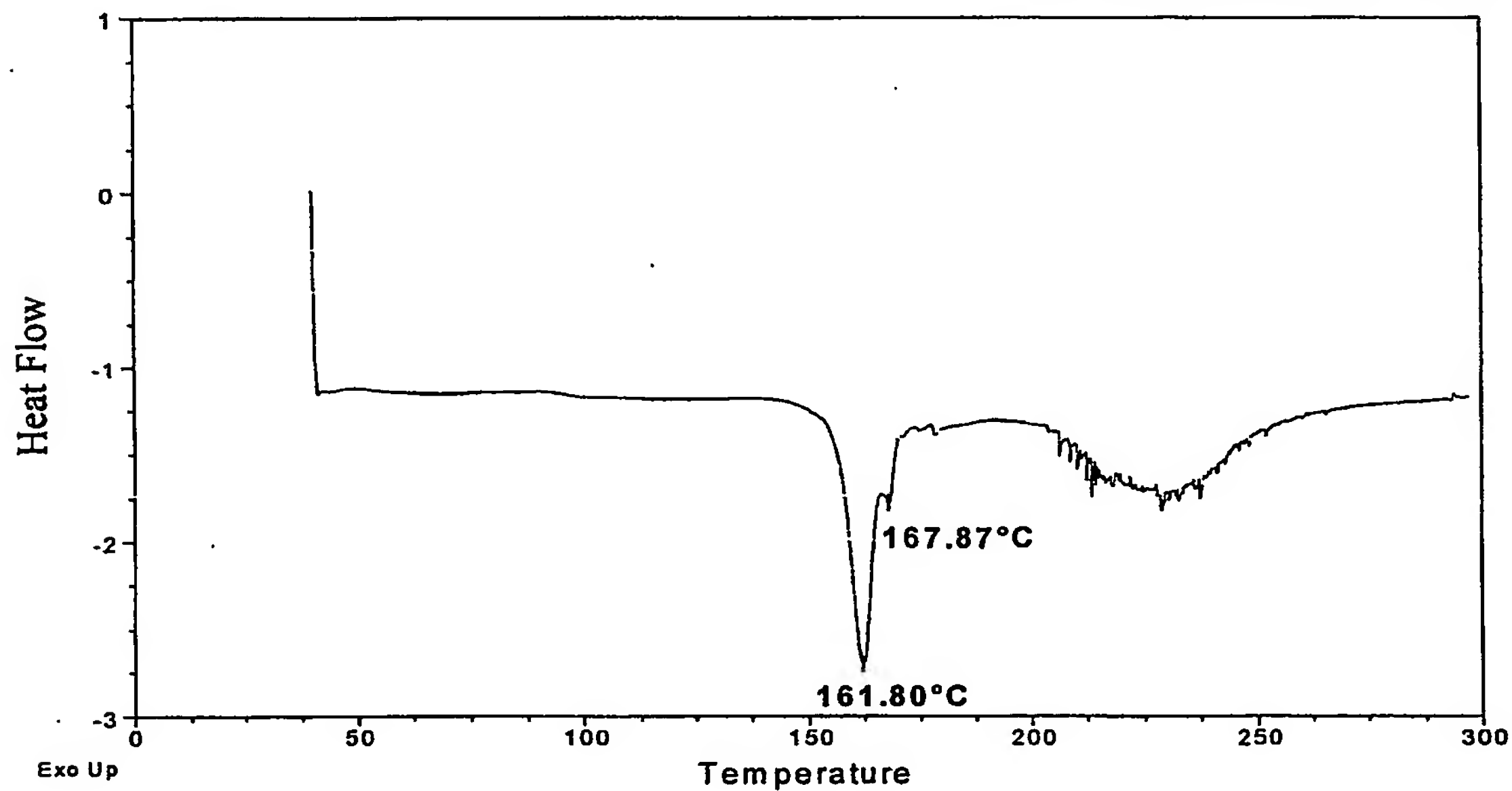


Figure 21

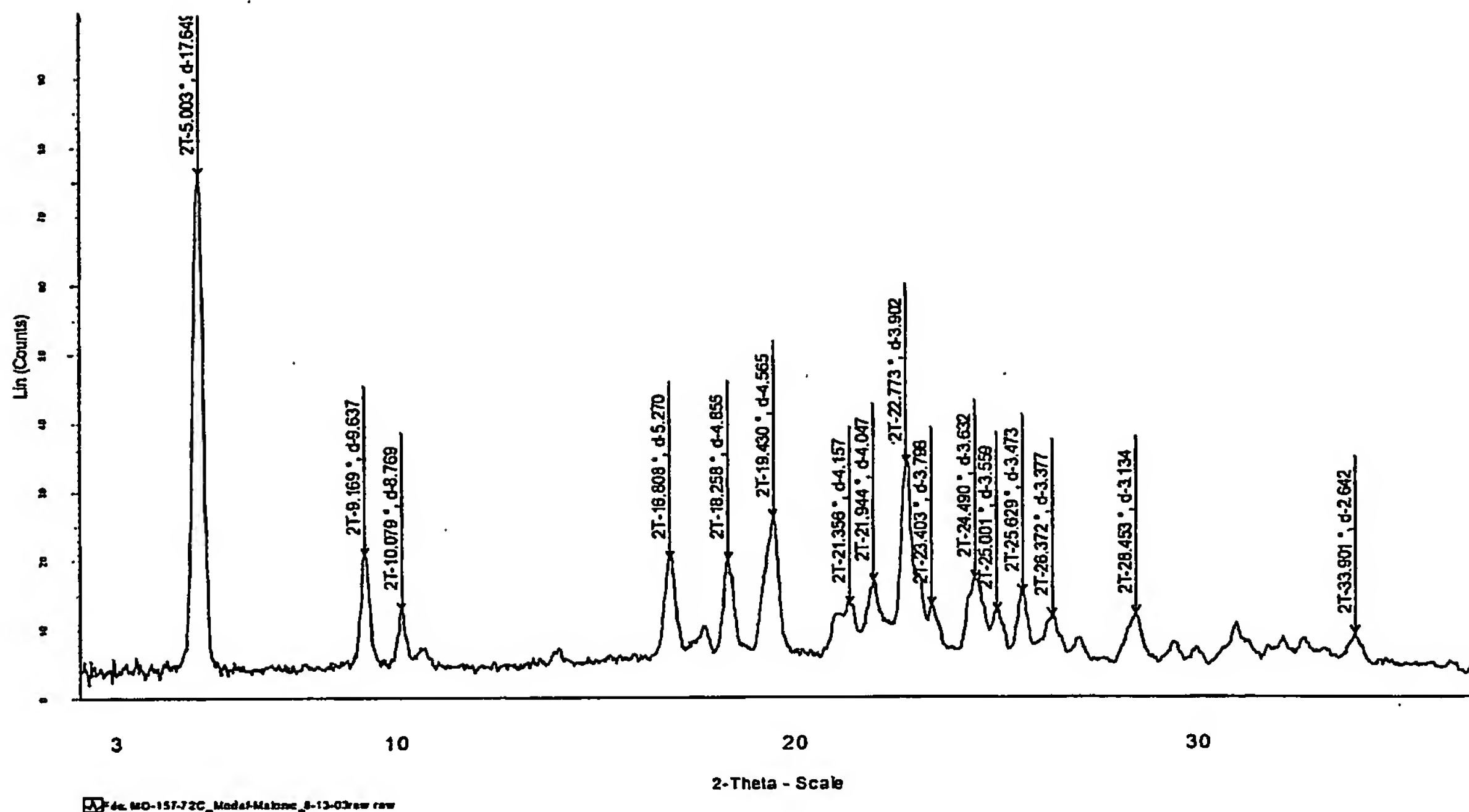


Figure 22

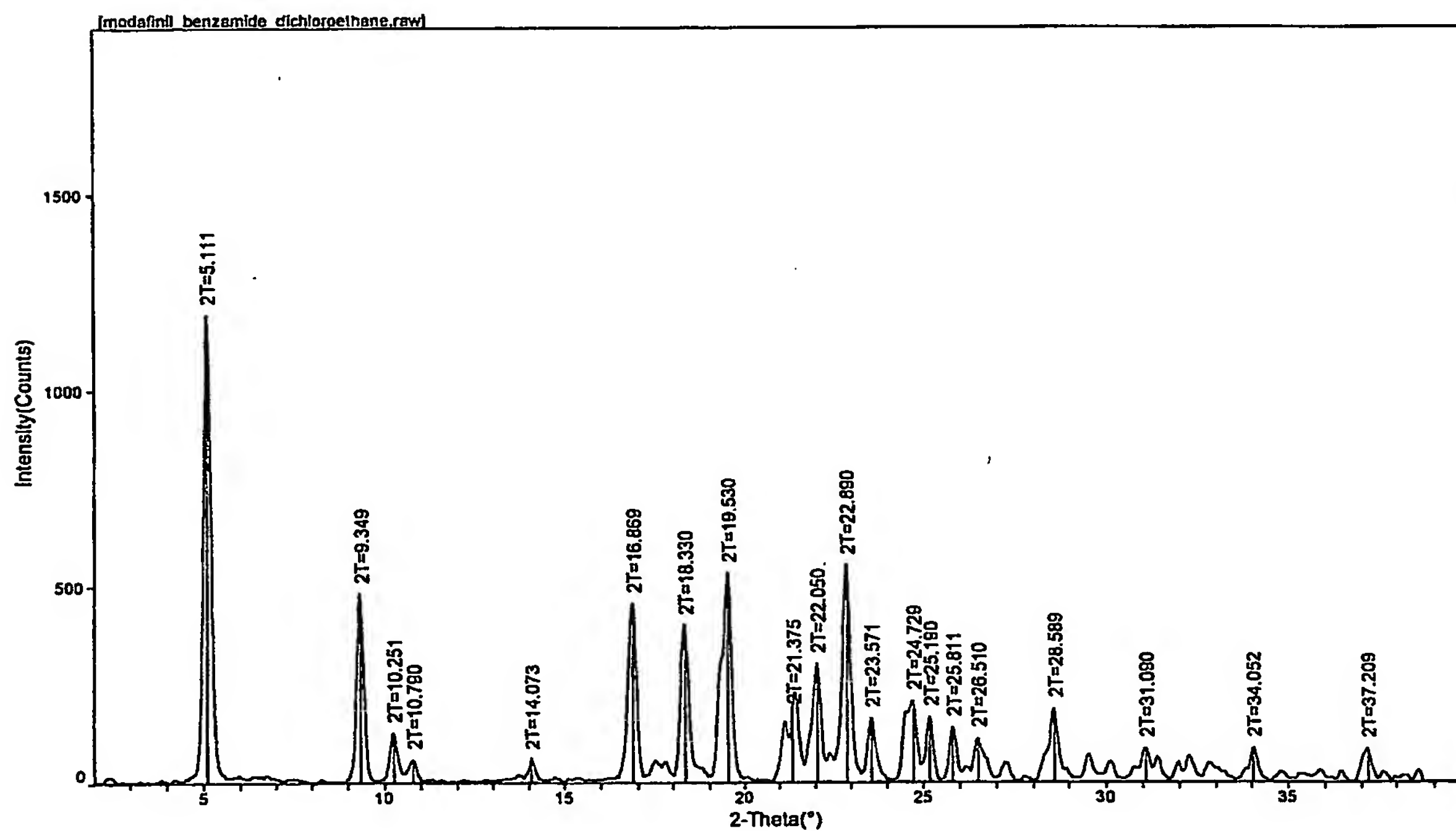


Figure 23

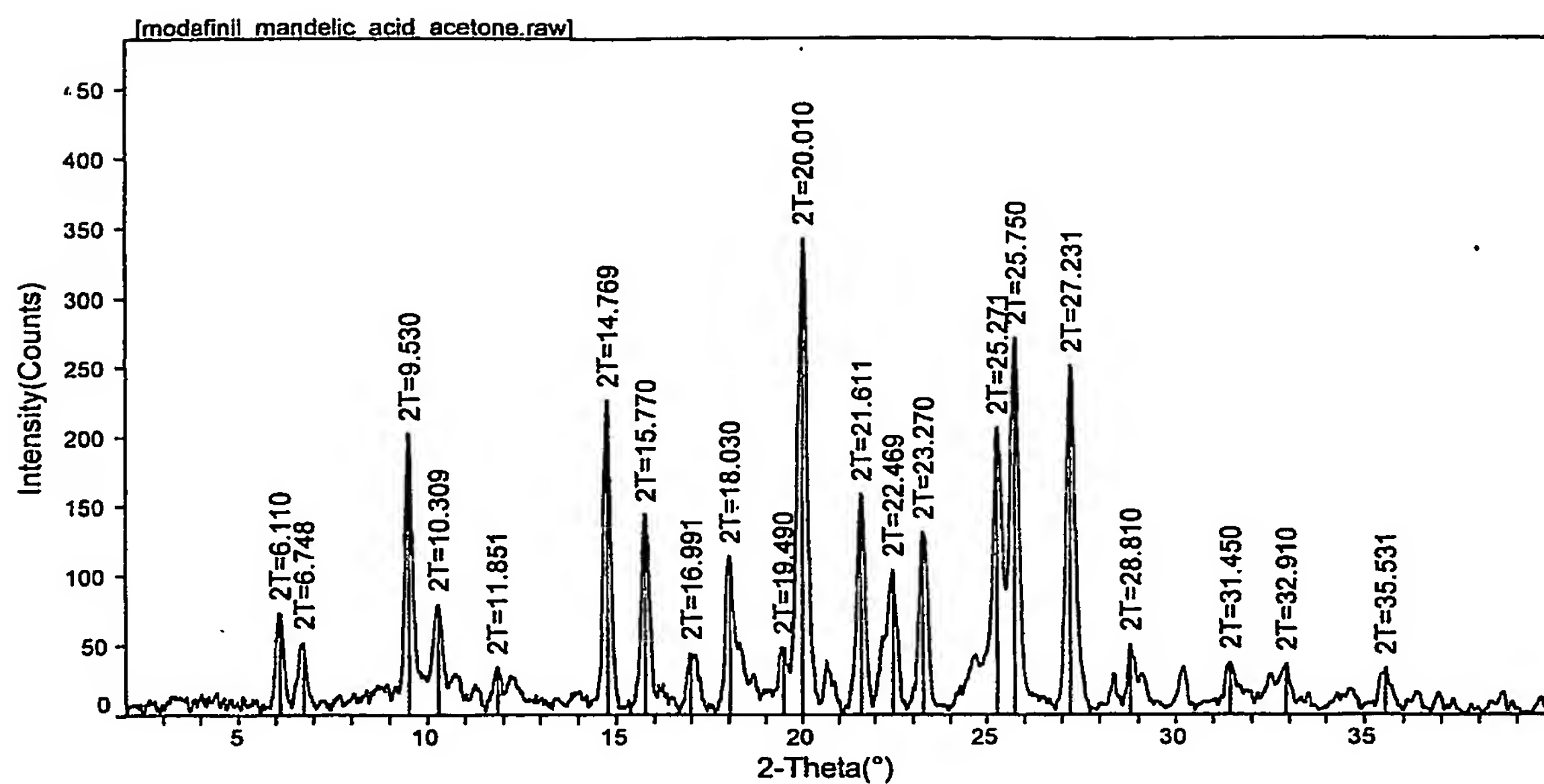


Figure 24

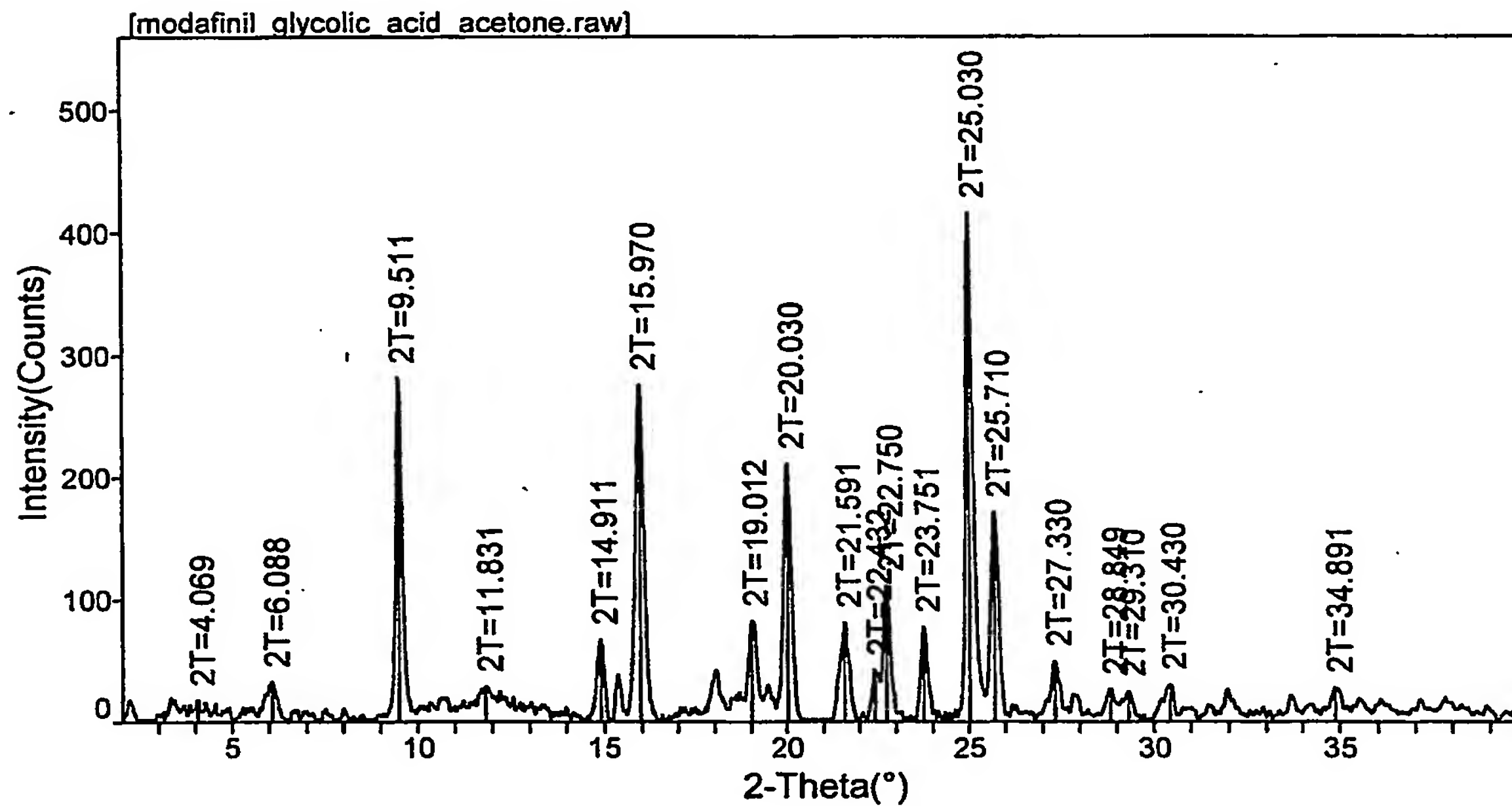


Figure 25

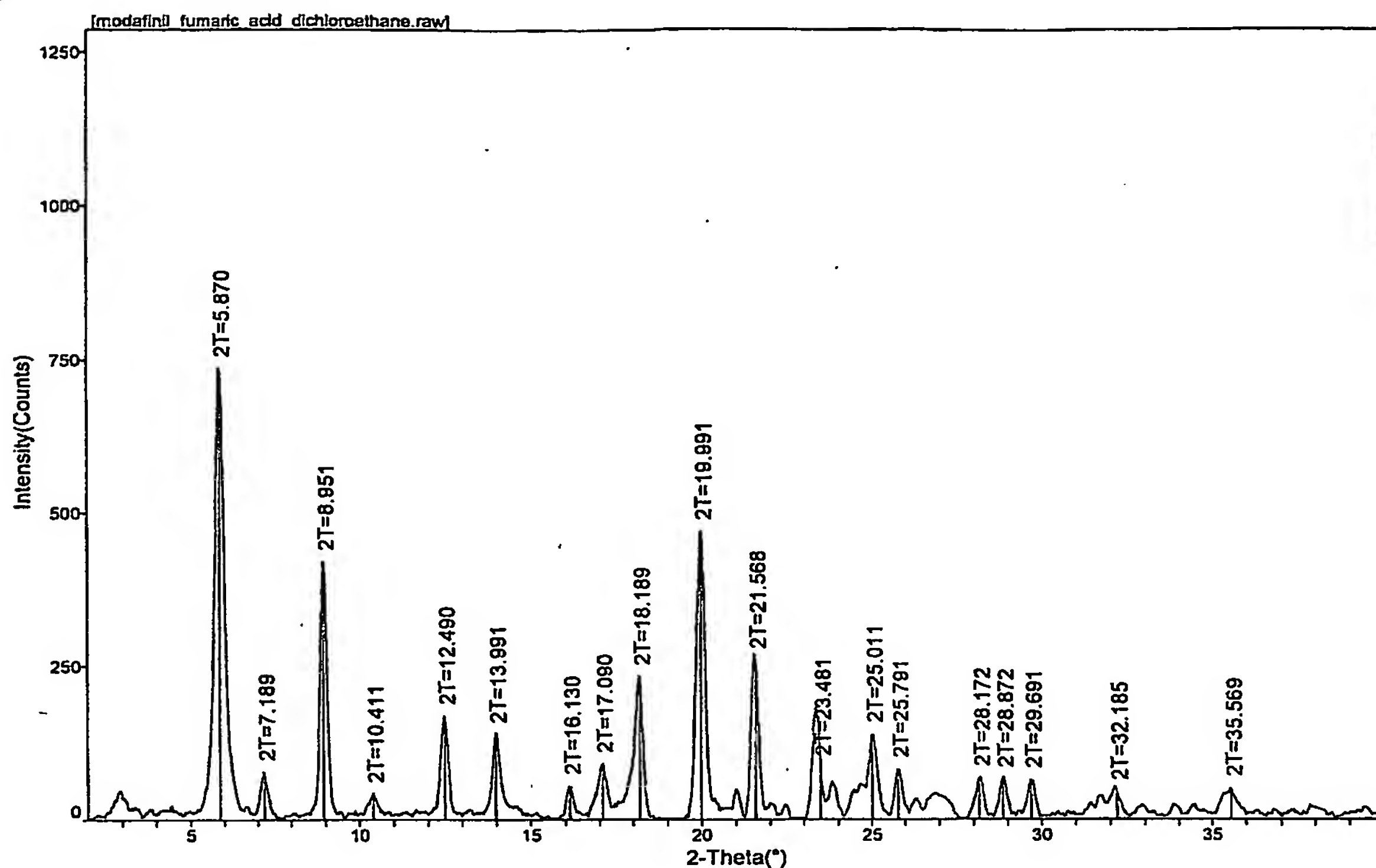


Figure 26

**Celecoxib Forms with Poloxamer 407 and Hydroxypropylcellulose**  
Dissolution in 5X diluted simulated gastric fluid (fasted state) at 37C

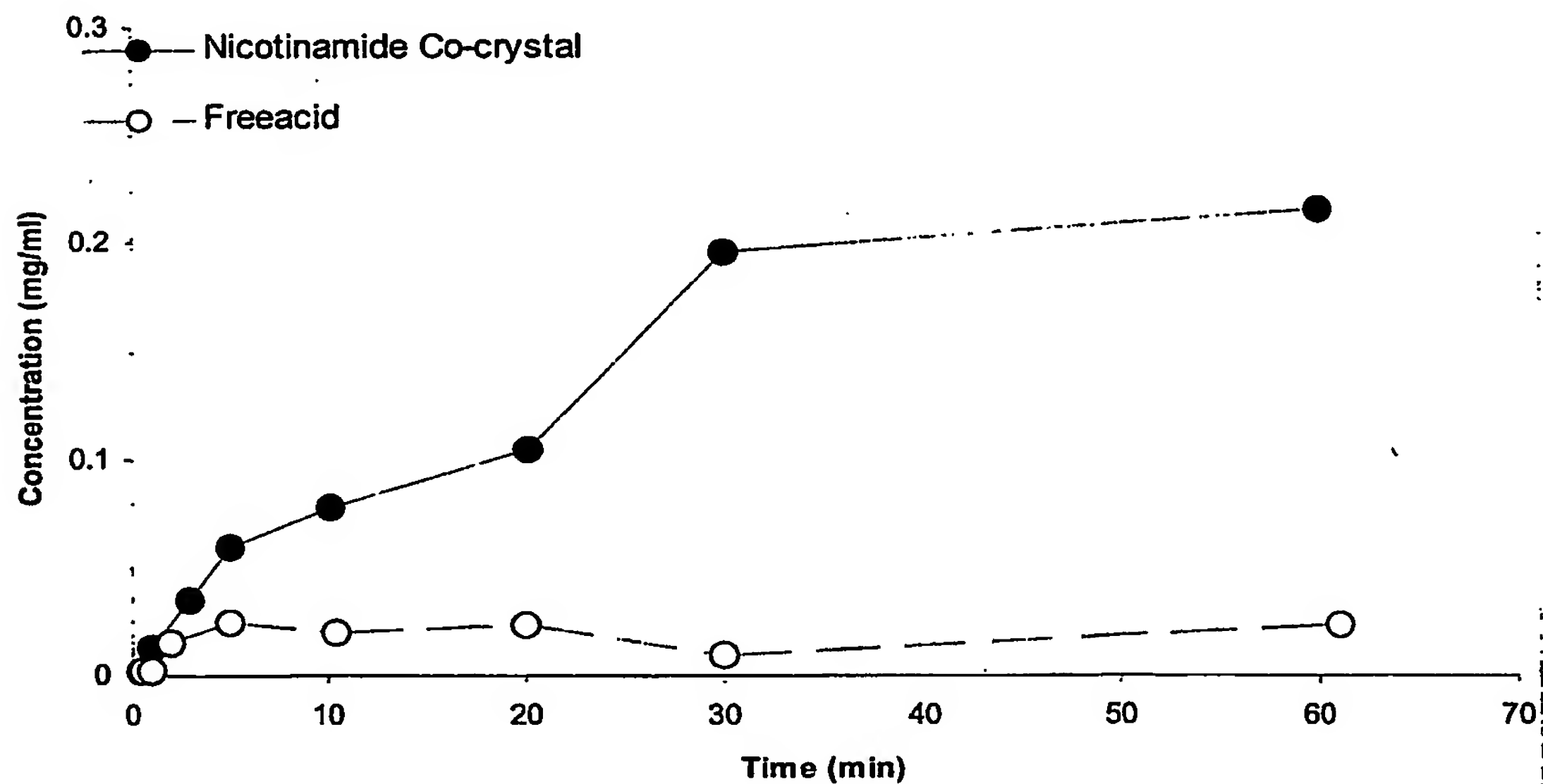
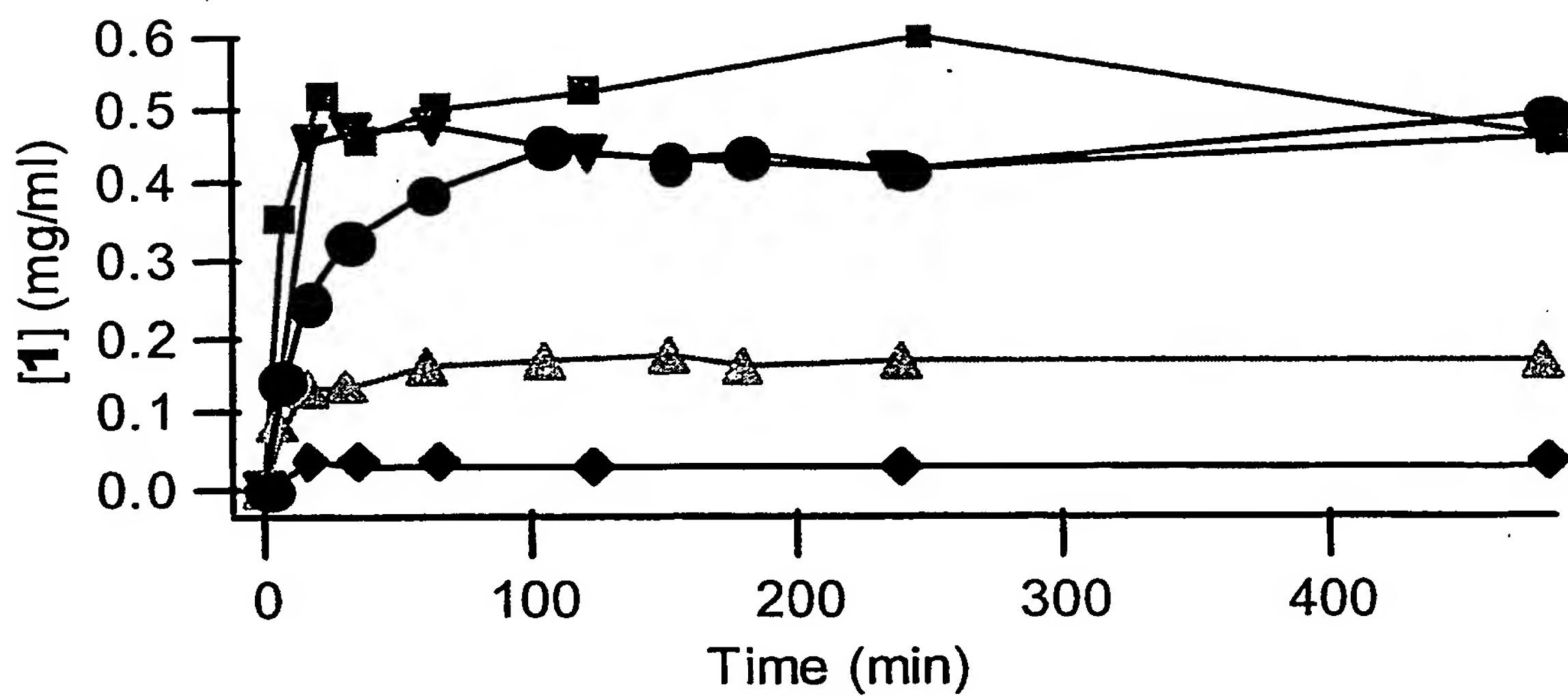


Figure 27





Dissolution profiles into 0.1 N HCl at 25 °C

Sporanox Beads (amorphous freebase) (Rectangle)

l-Malate (Inverted triangle)

l-Tartrate (Oval)

Succinate (Triangle)

Crystalline Freebase (Diamond)

Figure 28

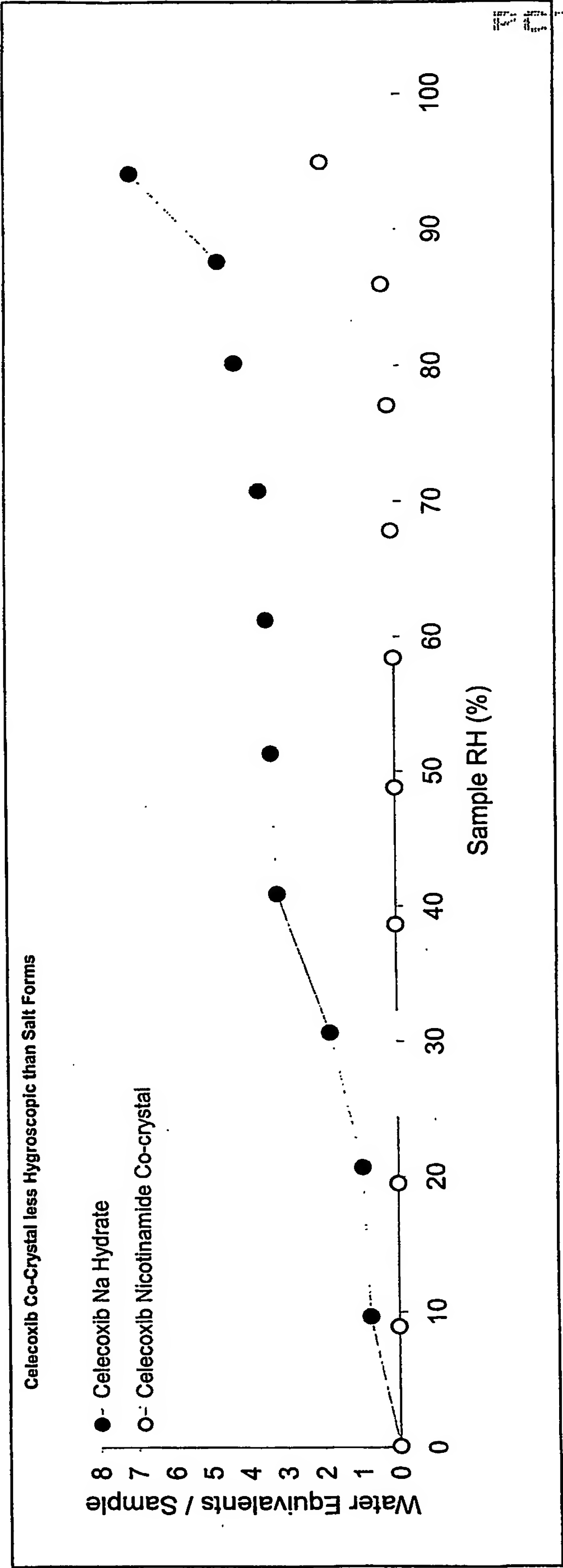


Figure 29

PCT 0903/3776

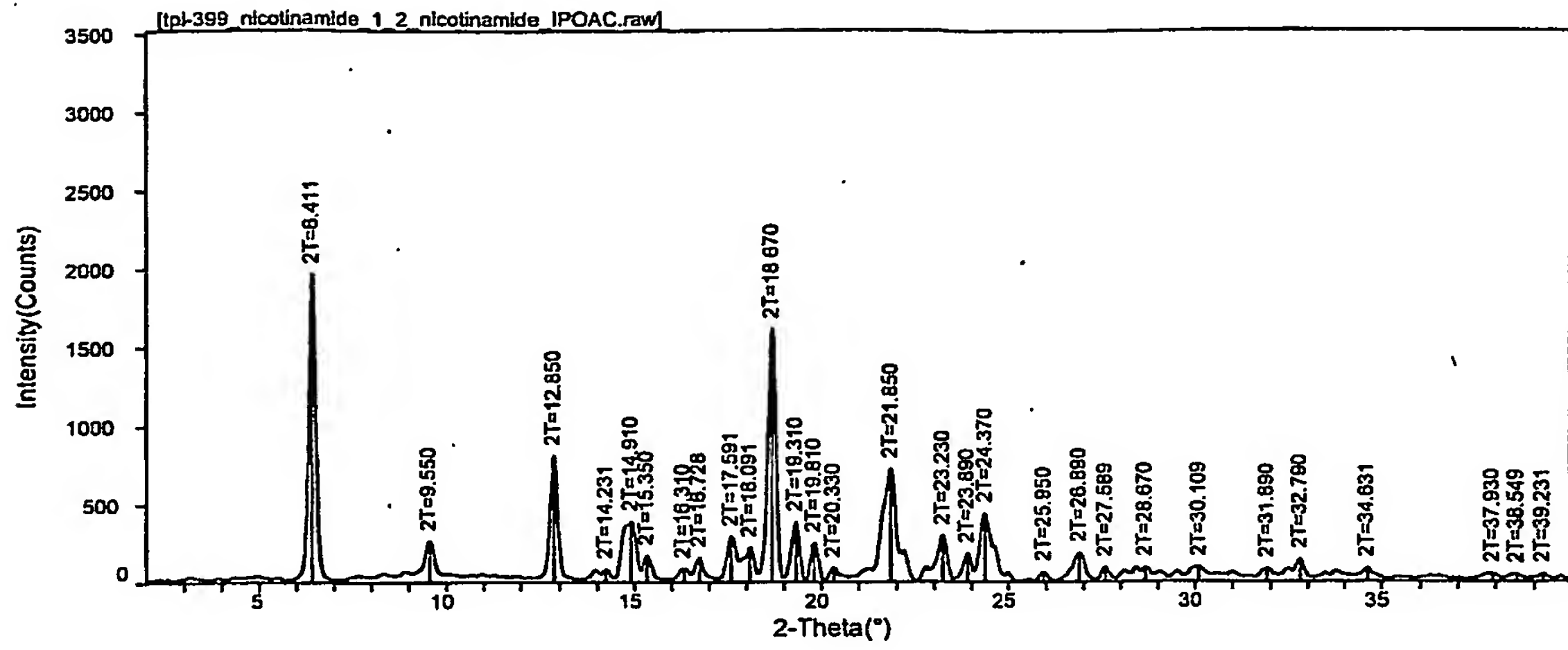


Figure 30

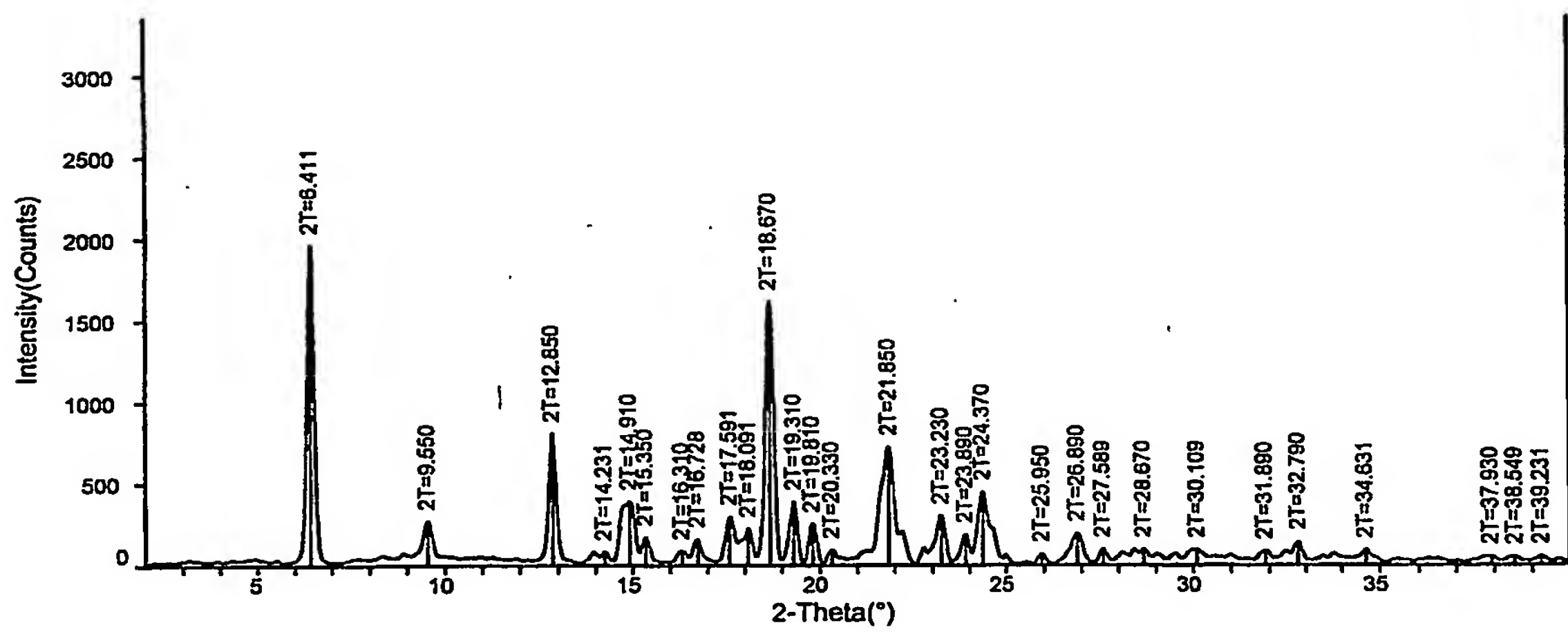


Figure 31

Molecular structure of the Olanzapine-nicotinamide-H<sub>2</sub>O-IPOAc crystal:

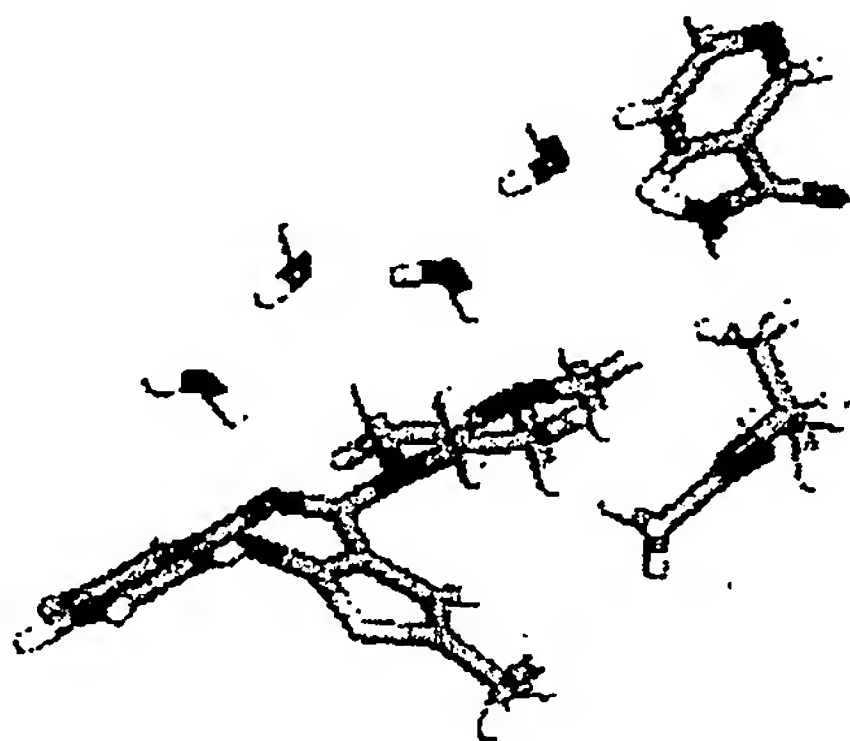


Figure 32A

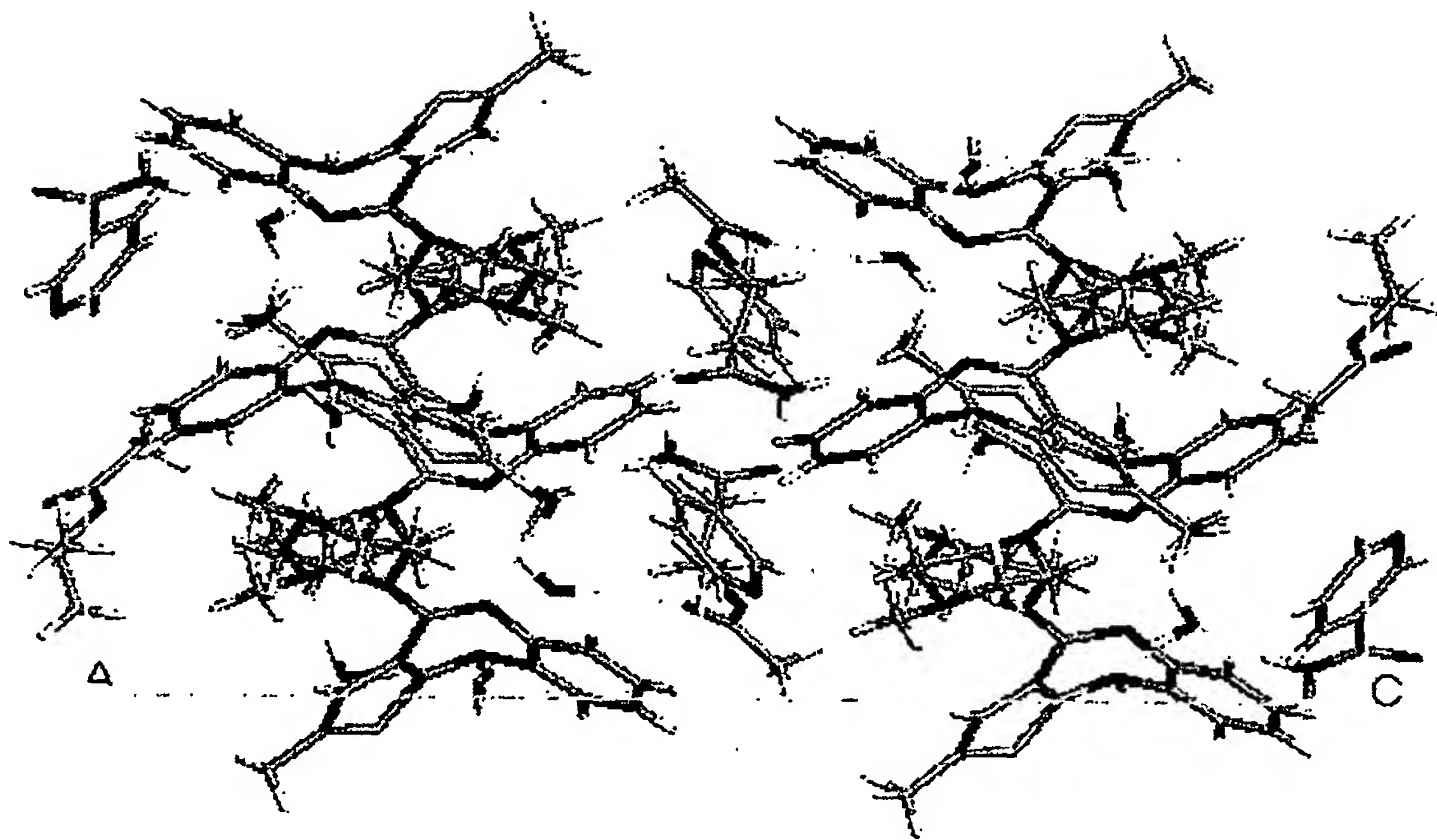
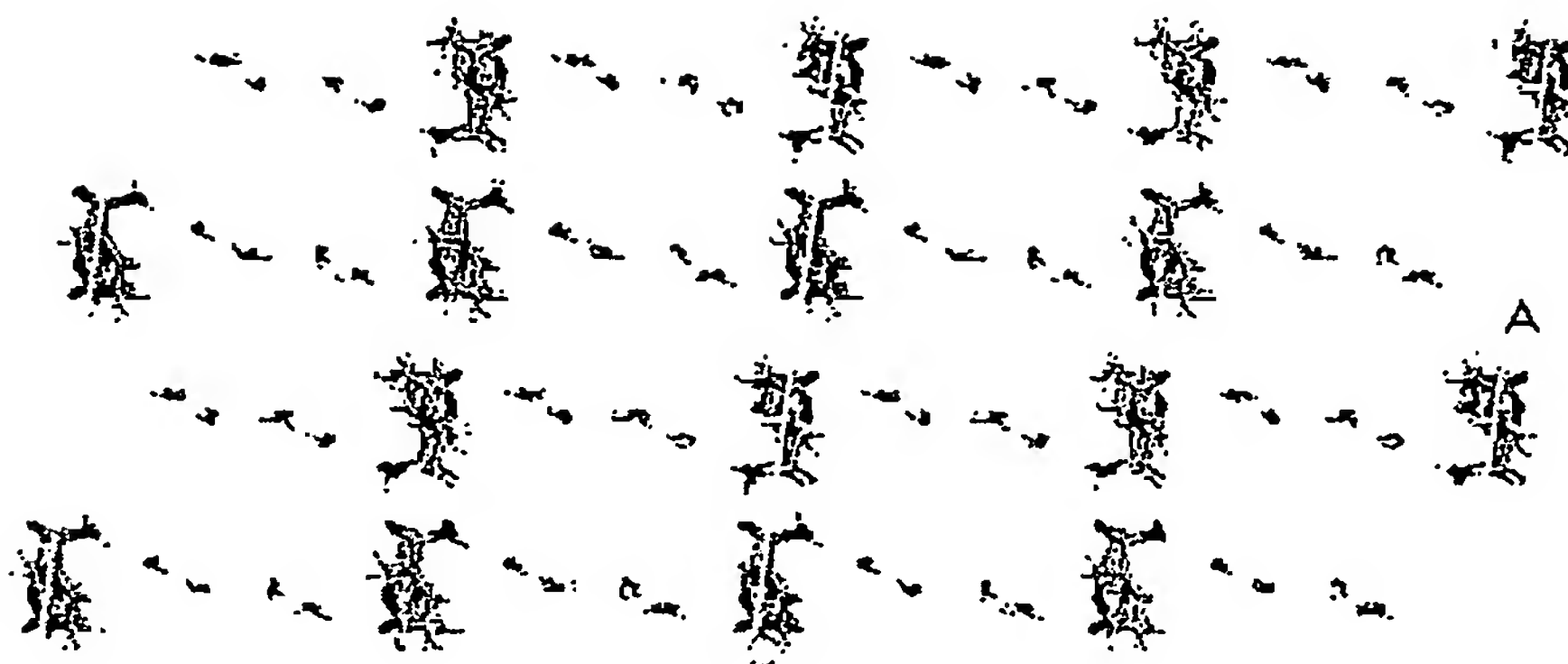


Figure 32B



The Olanzapine molecules occupy the spaces shown above and are hydrogen bonded to the water molecules.

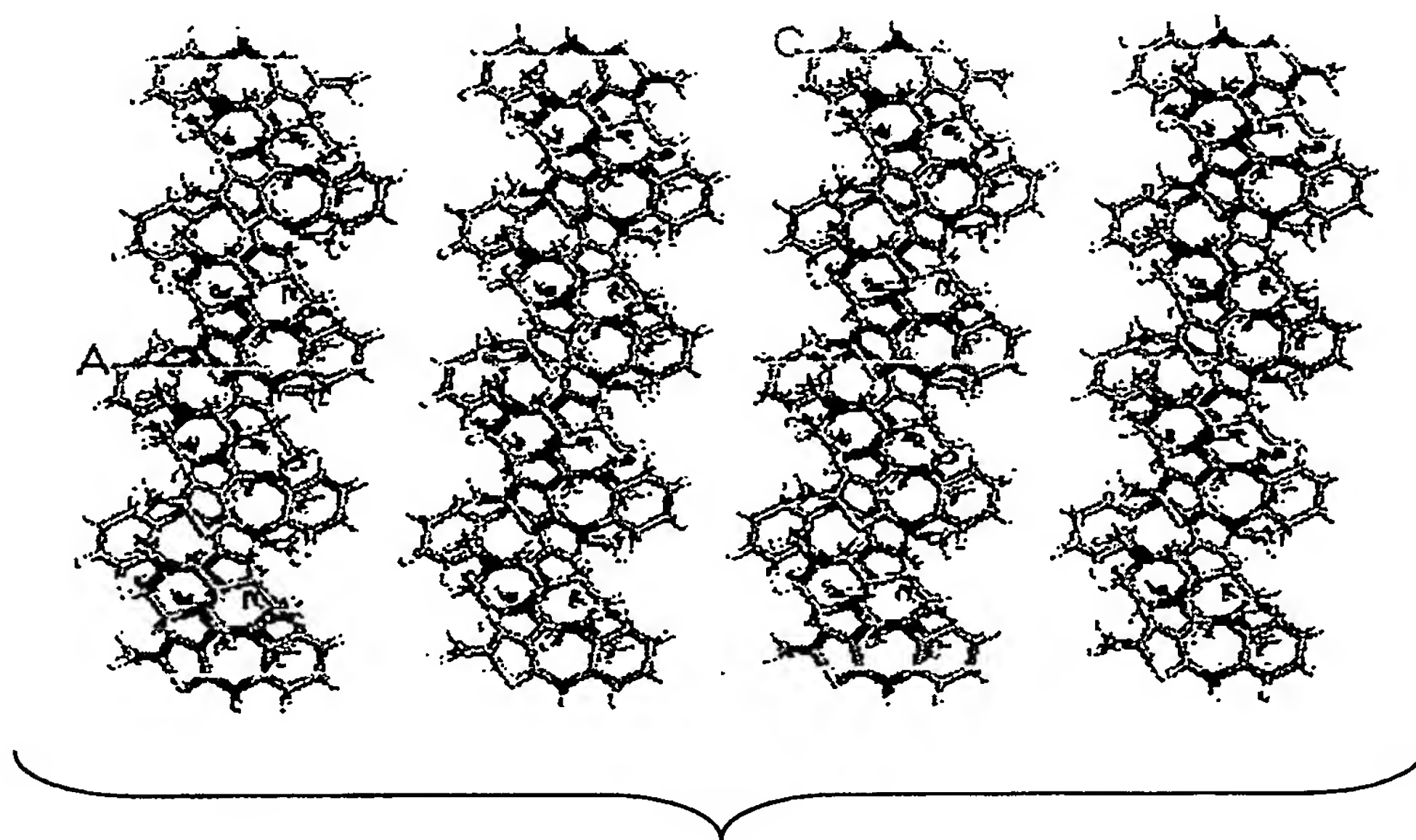


Figure 32C

The arrangement of the Olanzapine molecules is similar to that observed from the methanol solvate and the published structures for the hydrates. The water molecules bridge the Olanzapine moieties resulting in hydrogen-bonded zigzag sheets.

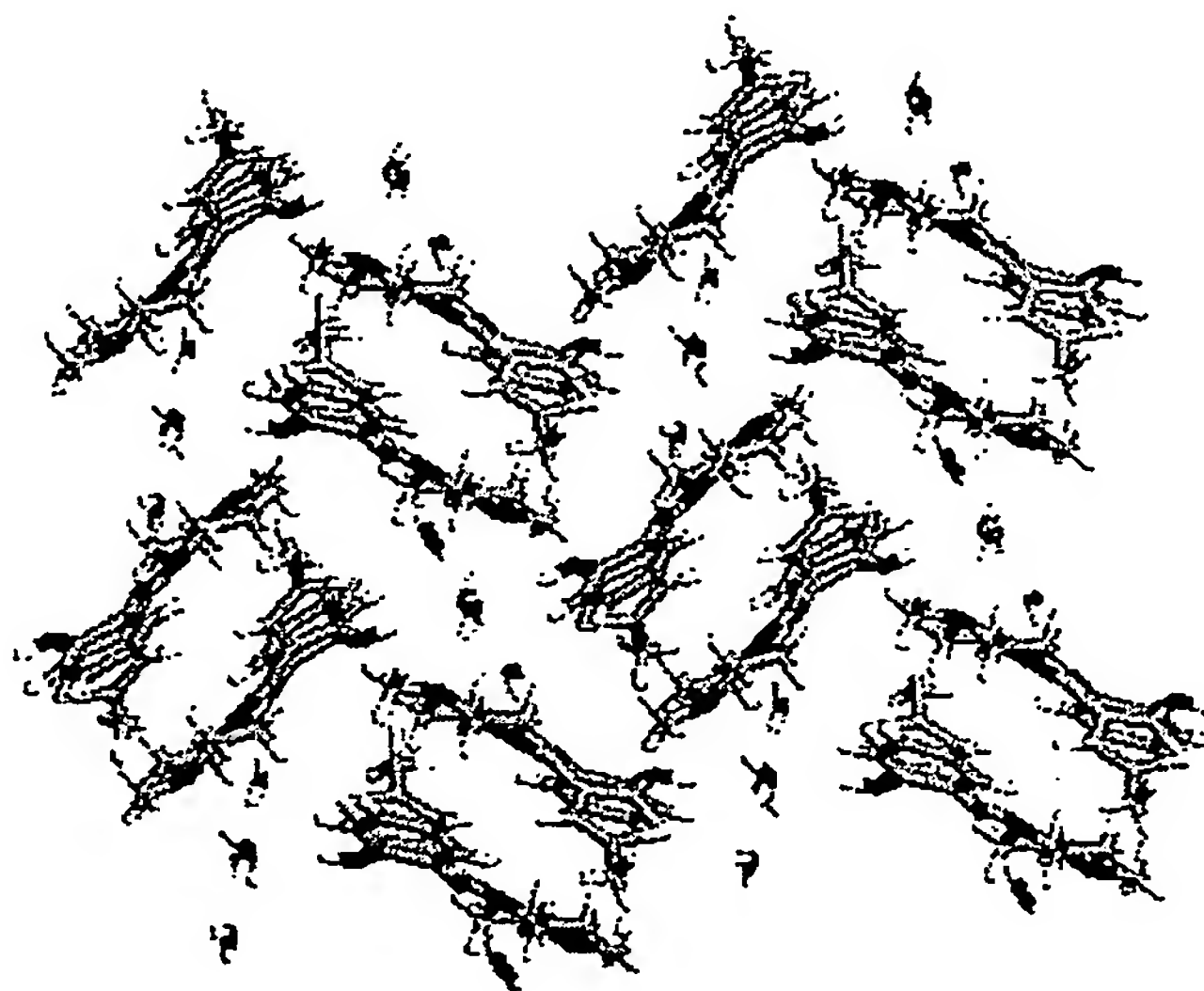


Figure 32D

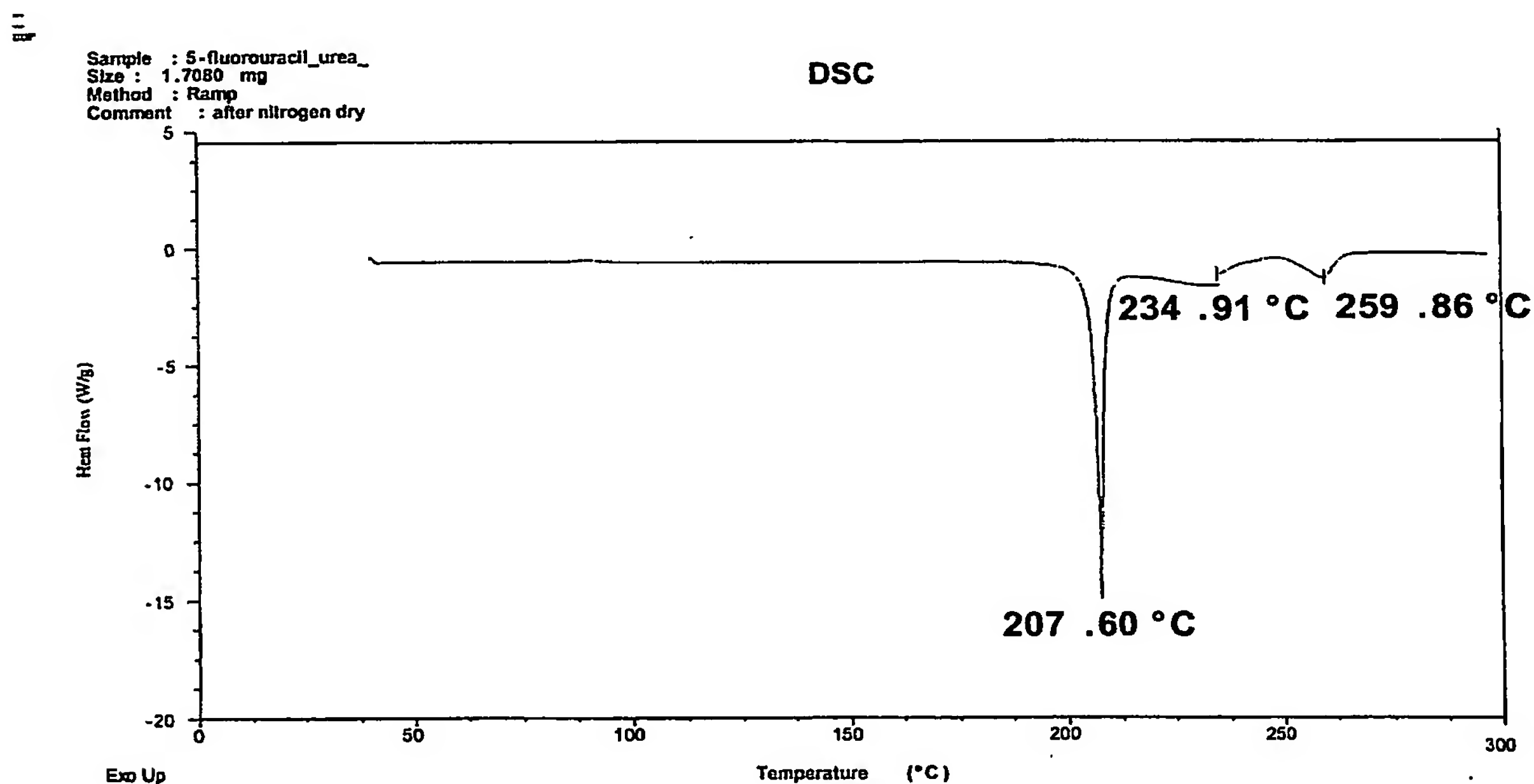


Figure 33

Sample : fluorouracil\_urea\_  
Size : 2.4360 mg  
Method : Ramp  
Comment : stabilitystudy/initial sample

## TGA

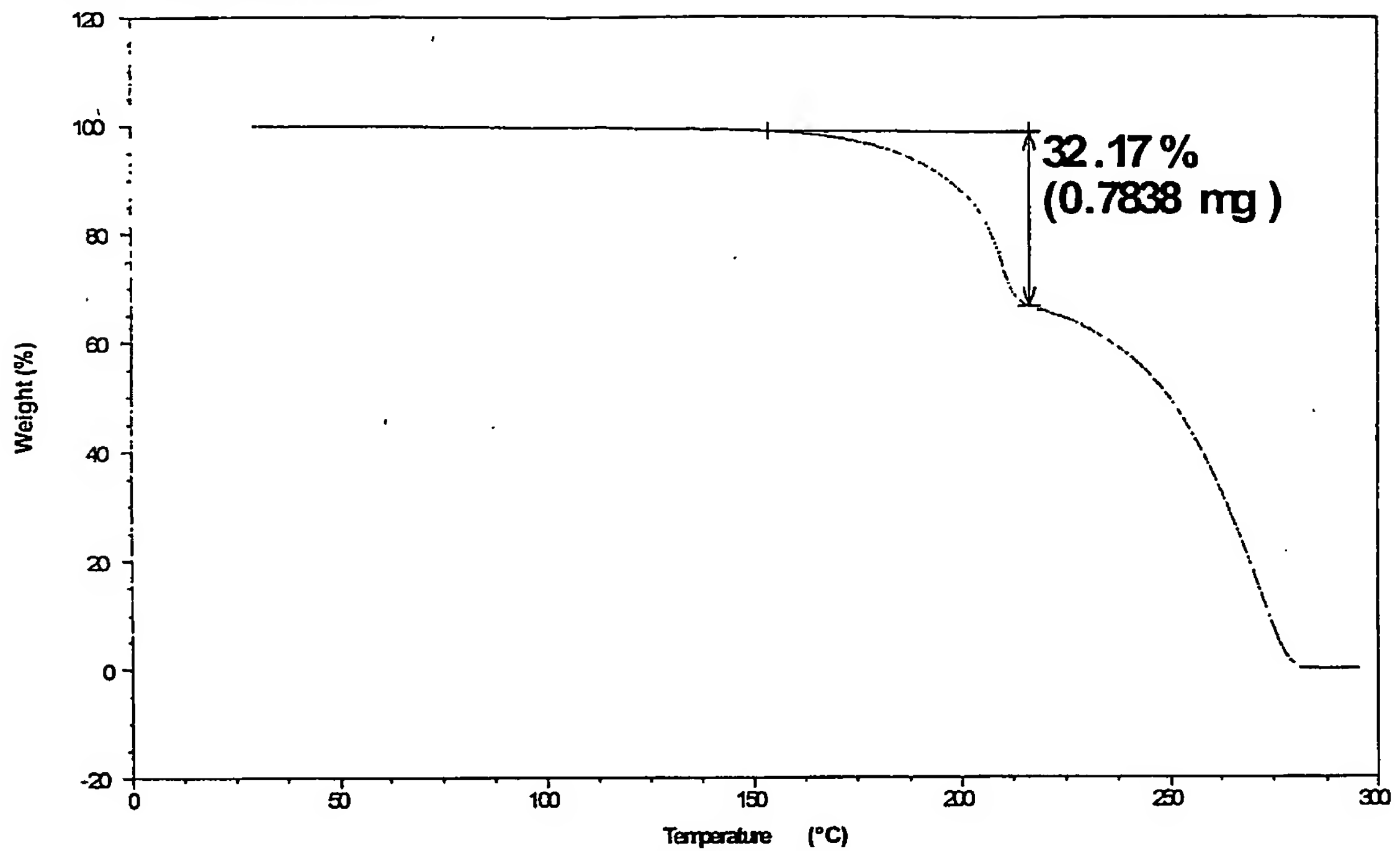


Figure 34

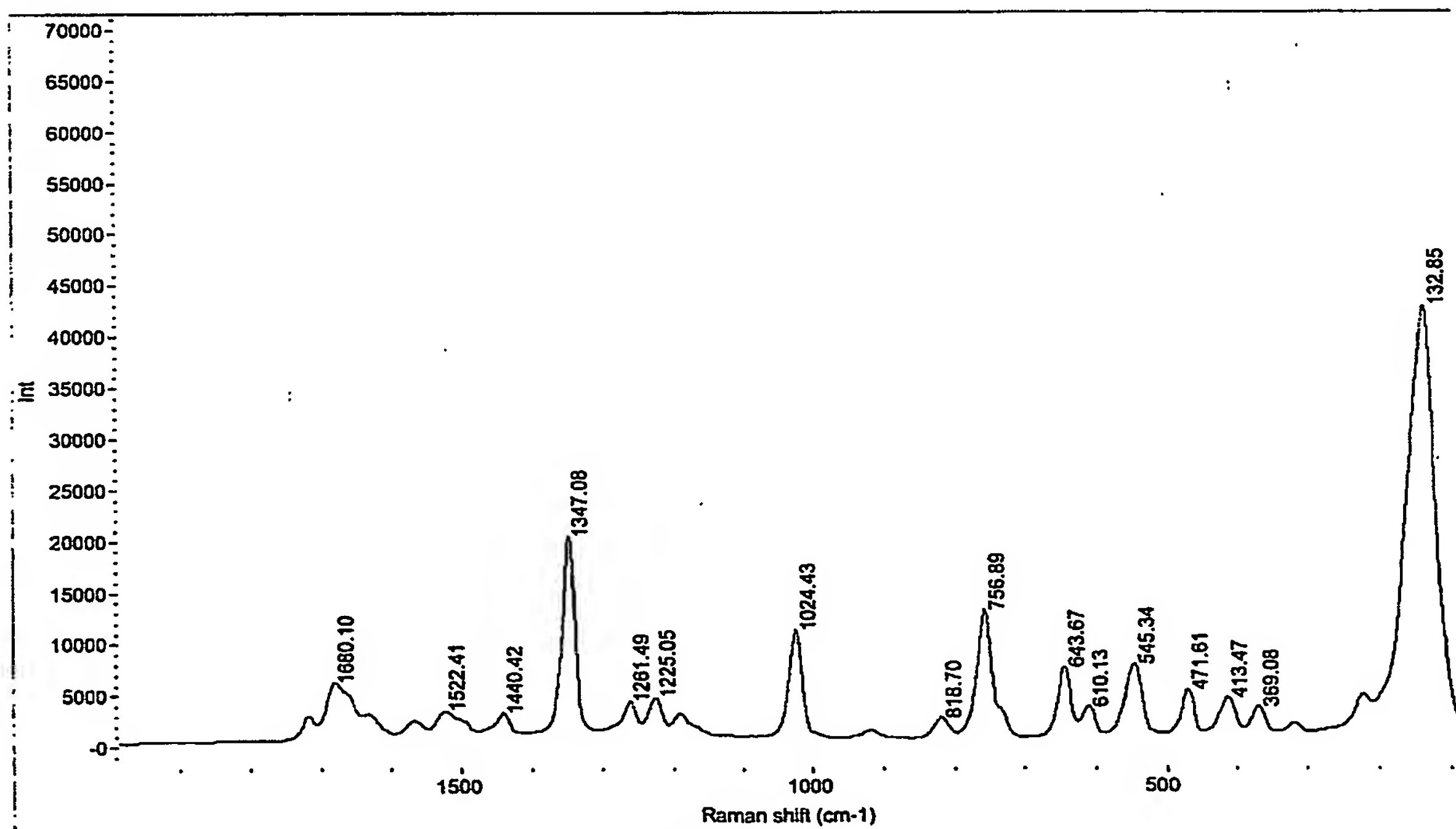


Figure 35



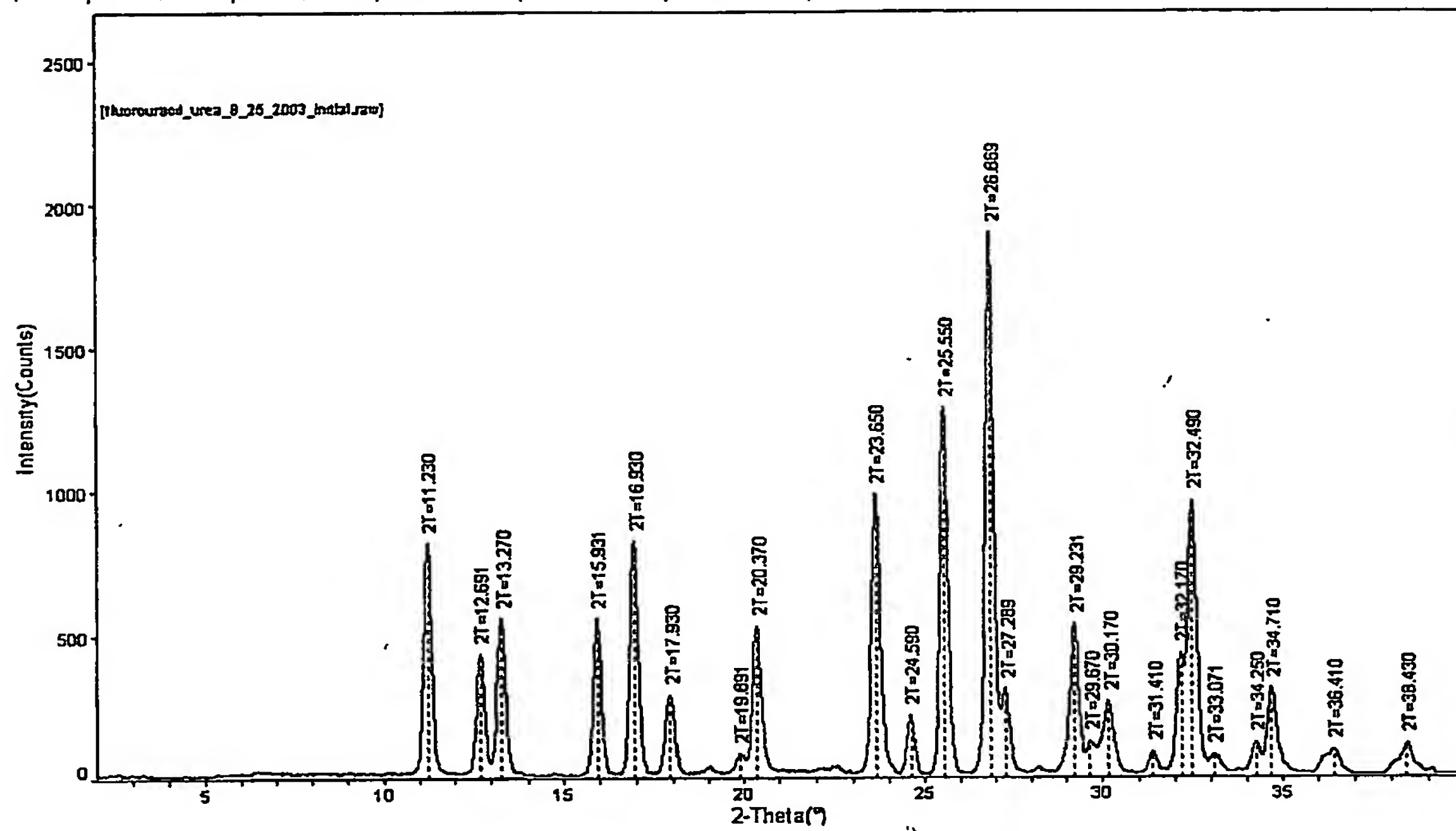


Figure 36

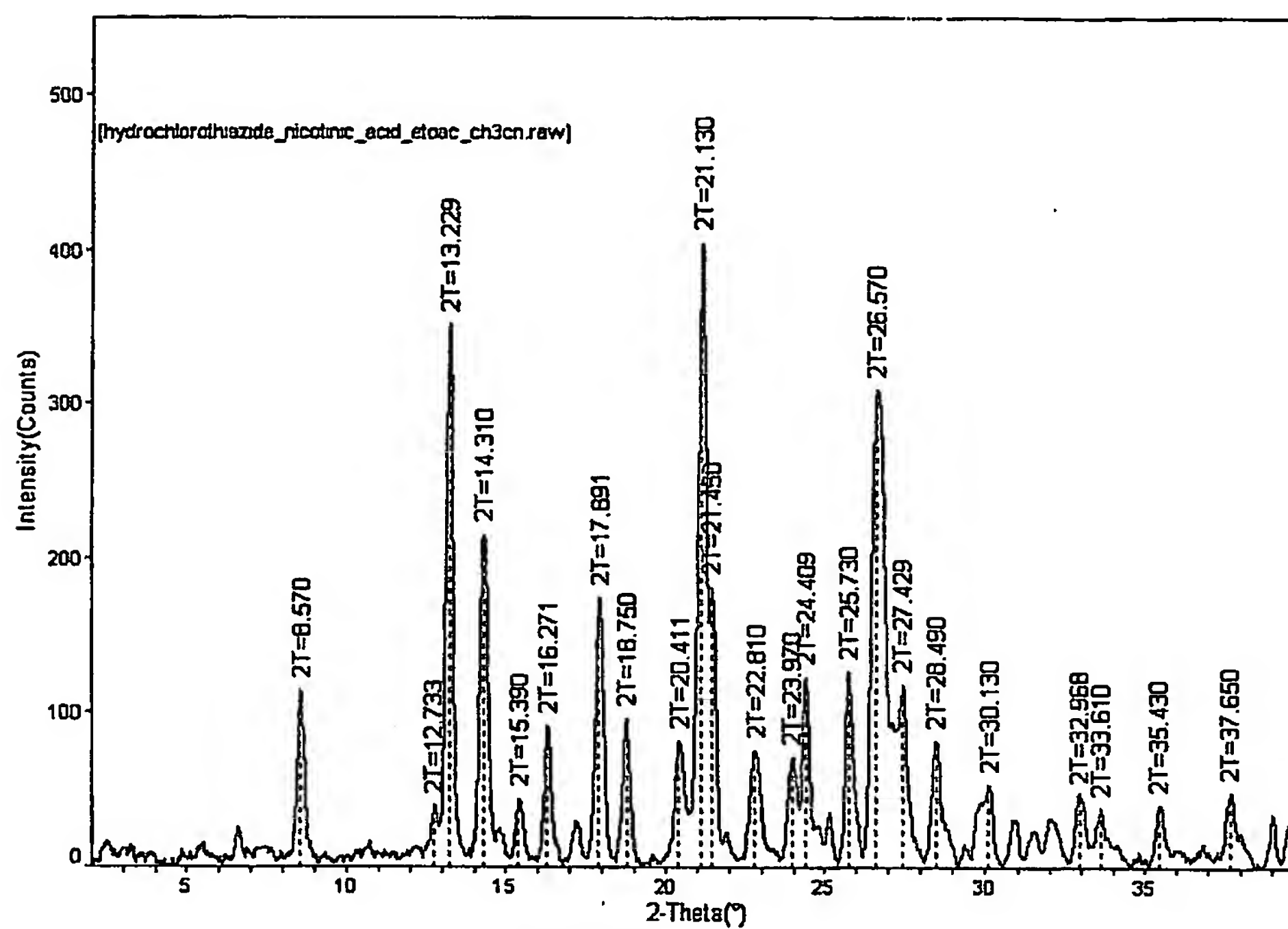


Figure 37

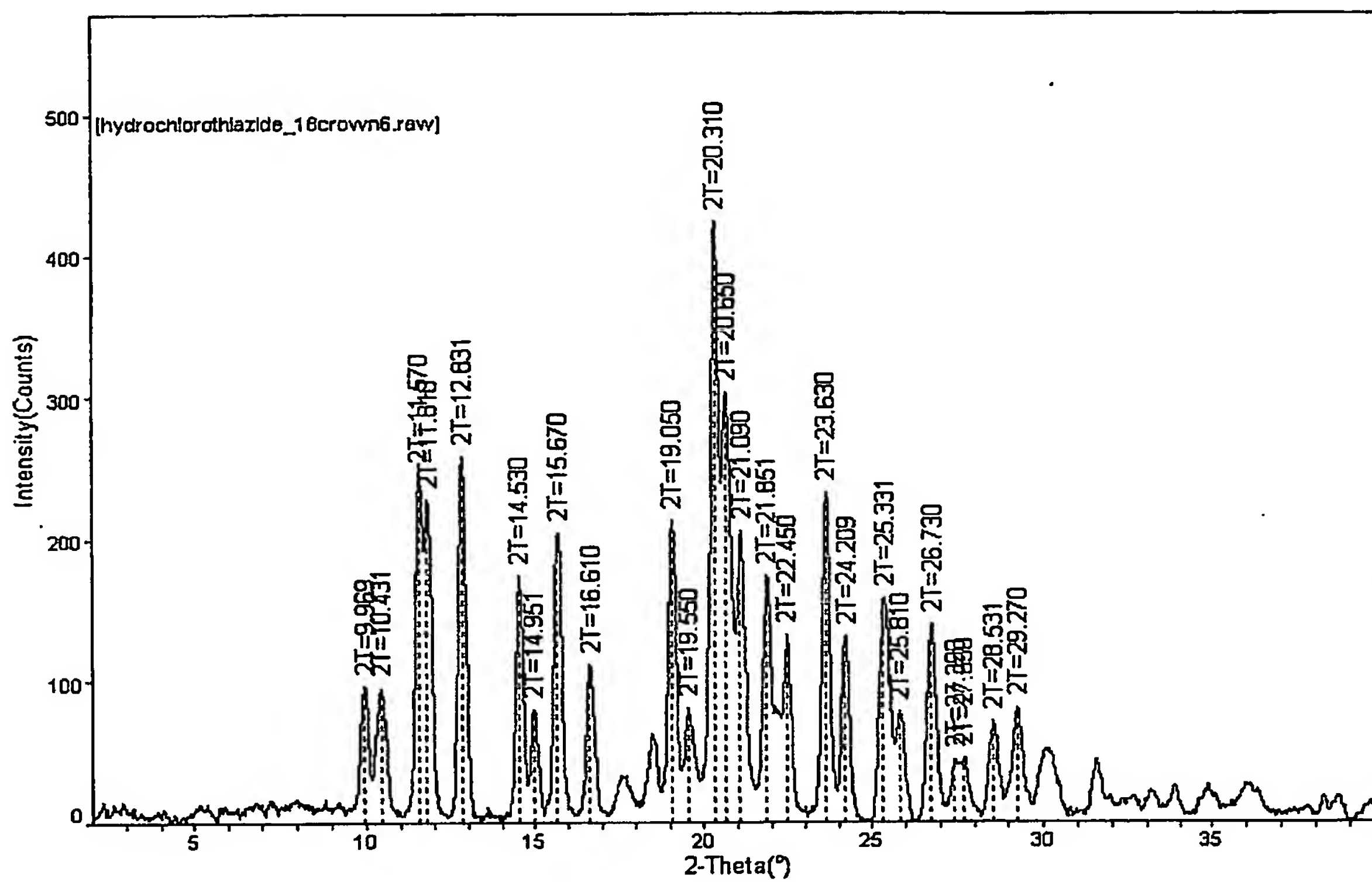
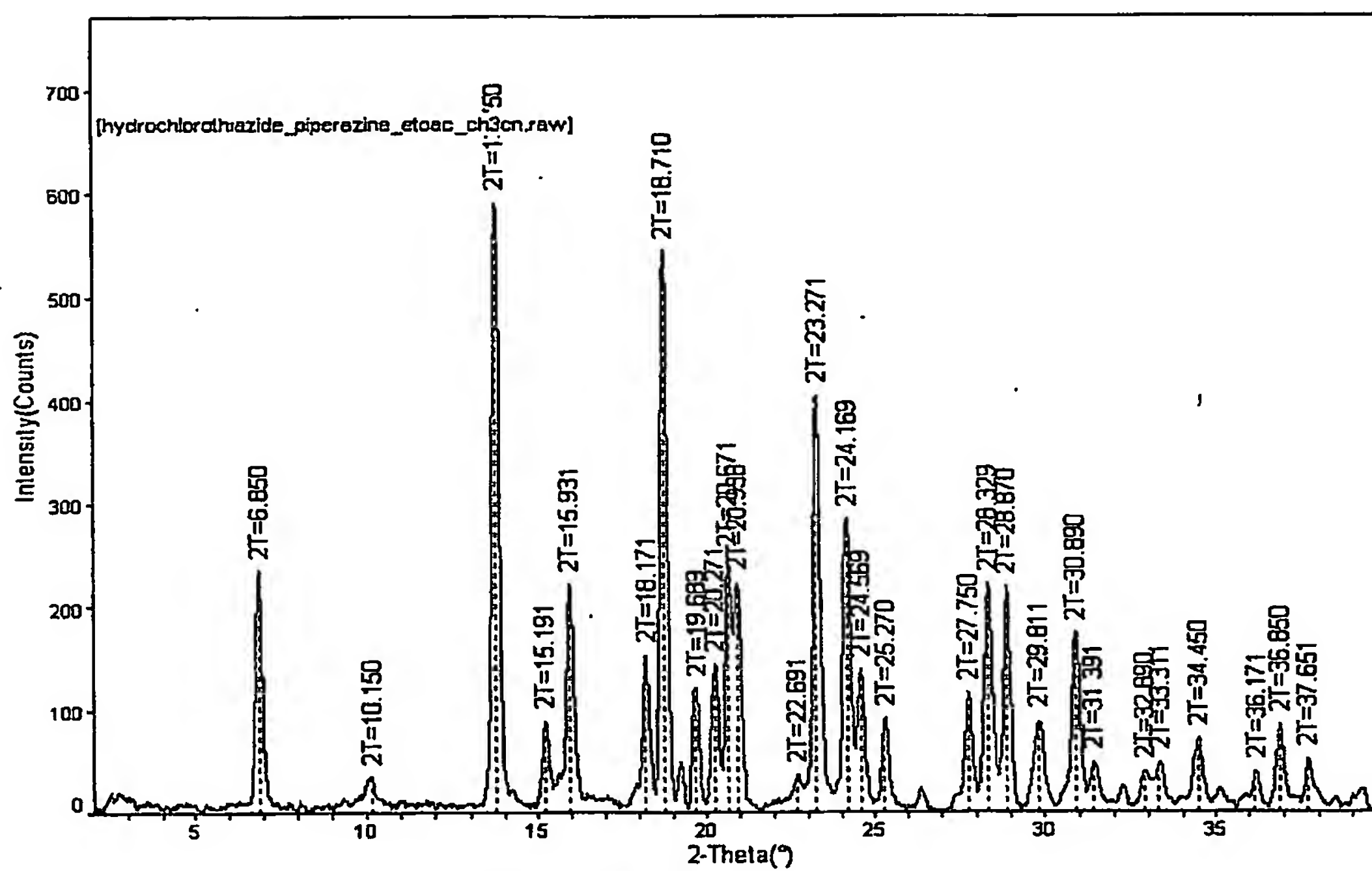


Figure 38



Materials Data, Inc.

Tuesday, Sep 02, 2003 11:11a (MDI/JADE5)

Figure 39

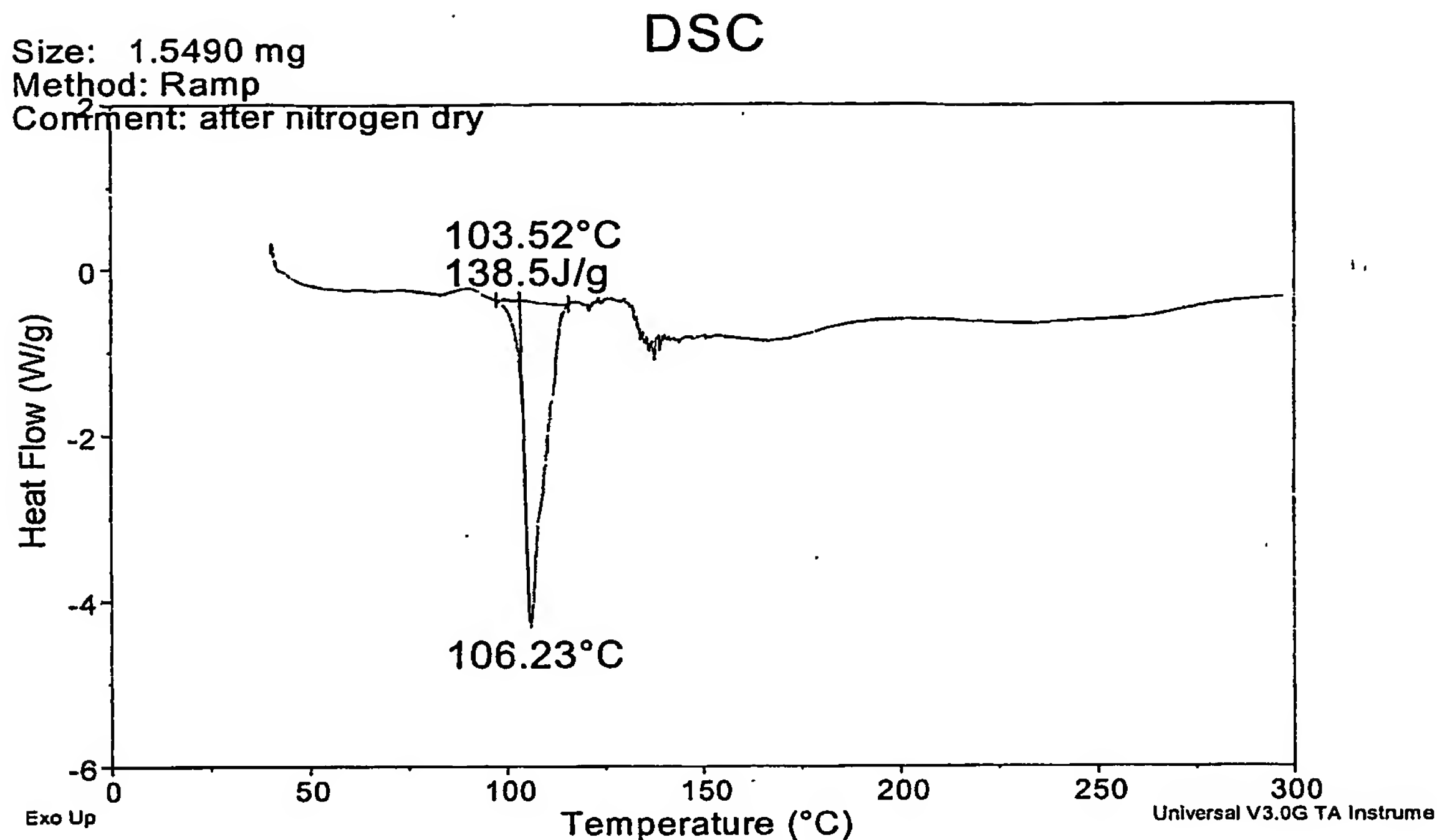


Figure 40

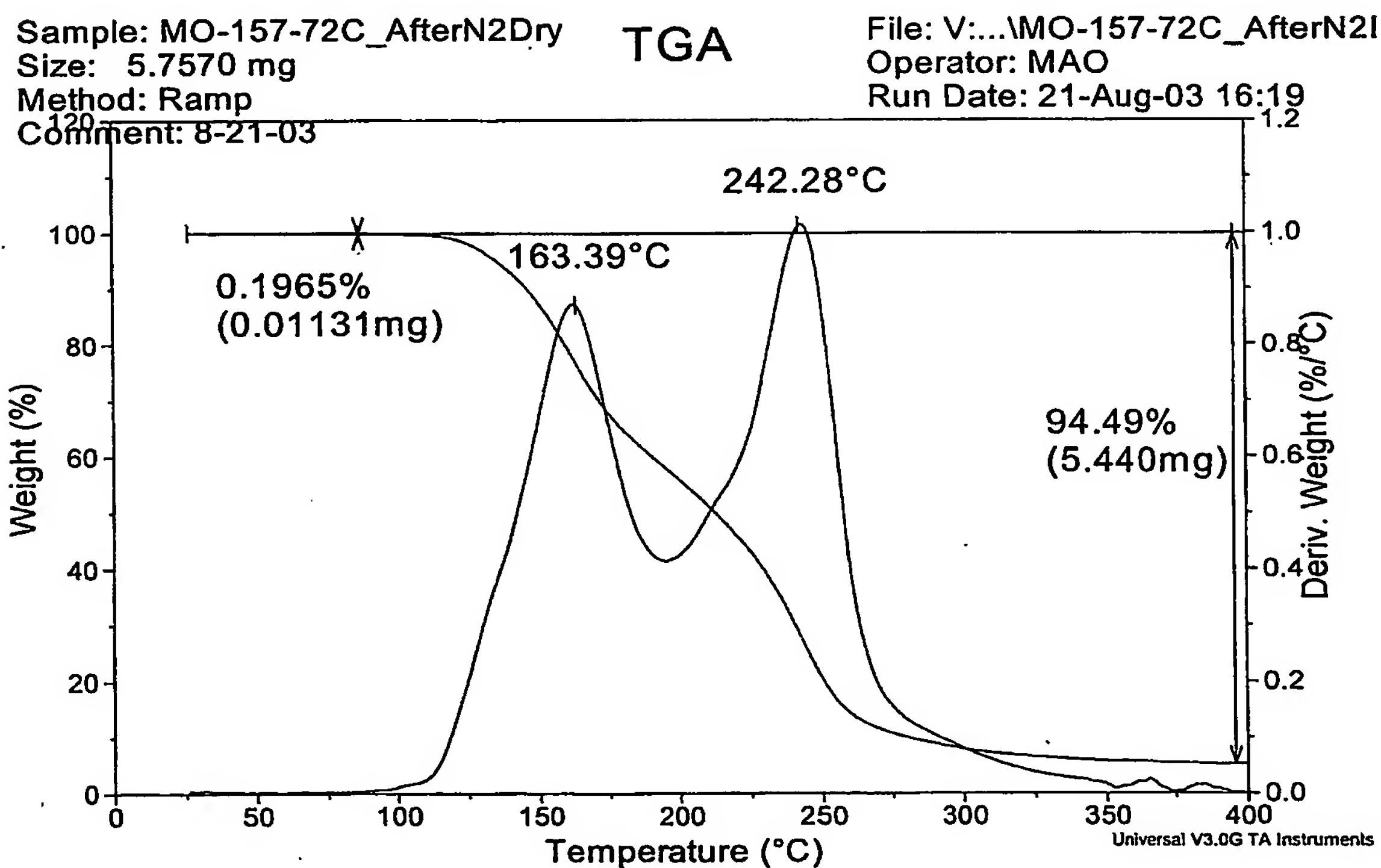
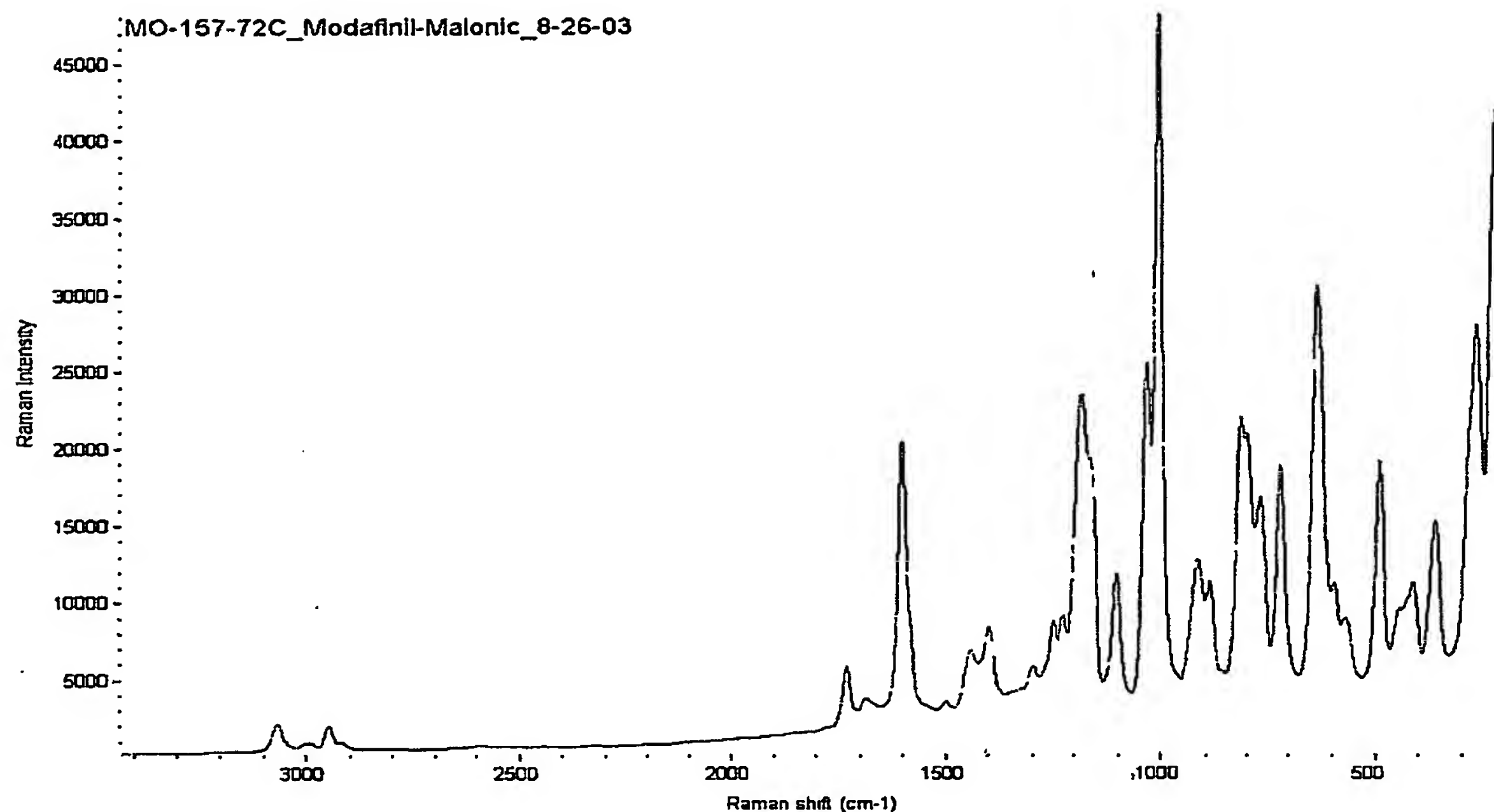


Figure 41



**FIND PEAKS:**

Spectrum: MO-157-72C\_Modafinil-Malonic

Region: 3432 200

Absolute threshold: 588.428

Sensitivity: 88

**Peak list:**

Position:	1004	Intensity:	48530.113
Position:	222	Intensity:	41831.178
Position:	833	Intensity:	30431.455
Position:	285	Intensity:	27832.348
Position:	1032	Intensity:	25424.108
Position:	1183	Intensity:	23455.441
Position:	814	Intensity:	21888.128
Position:	1801	Intensity:	20374.211
Position:	480	Intensity:	18817.488
Position:	718	Intensity:	18778.322
Position:	787	Intensity:	18681.541
Position:	381	Intensity:	15080.872
Position:	917	Intensity:	12651.283
Position:	1104	Intensity:	11708.740
Position:	888	Intensity:	11172.833
Position:	412	Intensity:	11137.415
Position:	1225	Intensity:	9027.108
Position:	1251	Intensity:	8844.833
Position:	1388	Intensity:	8252.702
Position:	1442	Intensity:	8738.884
Position:	1731	Intensity:	5730.558
Position:	1288	Intensity:	5700.058
Position:	3085	Intensity:	1835.514
Position:	2848	Intensity:	1812.835

Exposure time: 2.00 sec

Number of exposures: 15

Number of background exposures: 15

Grating: 360 lines/mm

Spectrograph aperture: 100  $\mu$ m slit

**Figure 42**

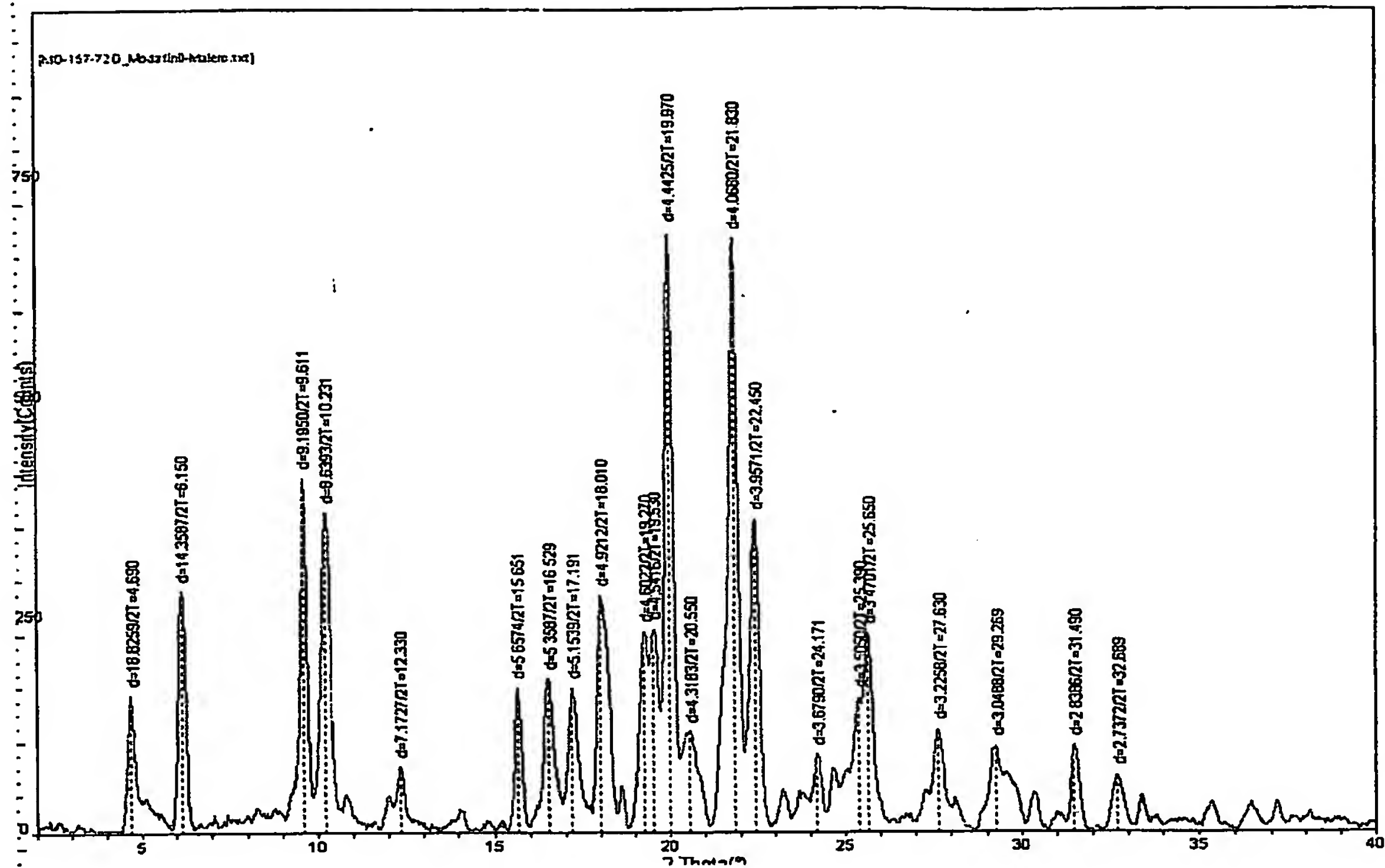


Figure 43



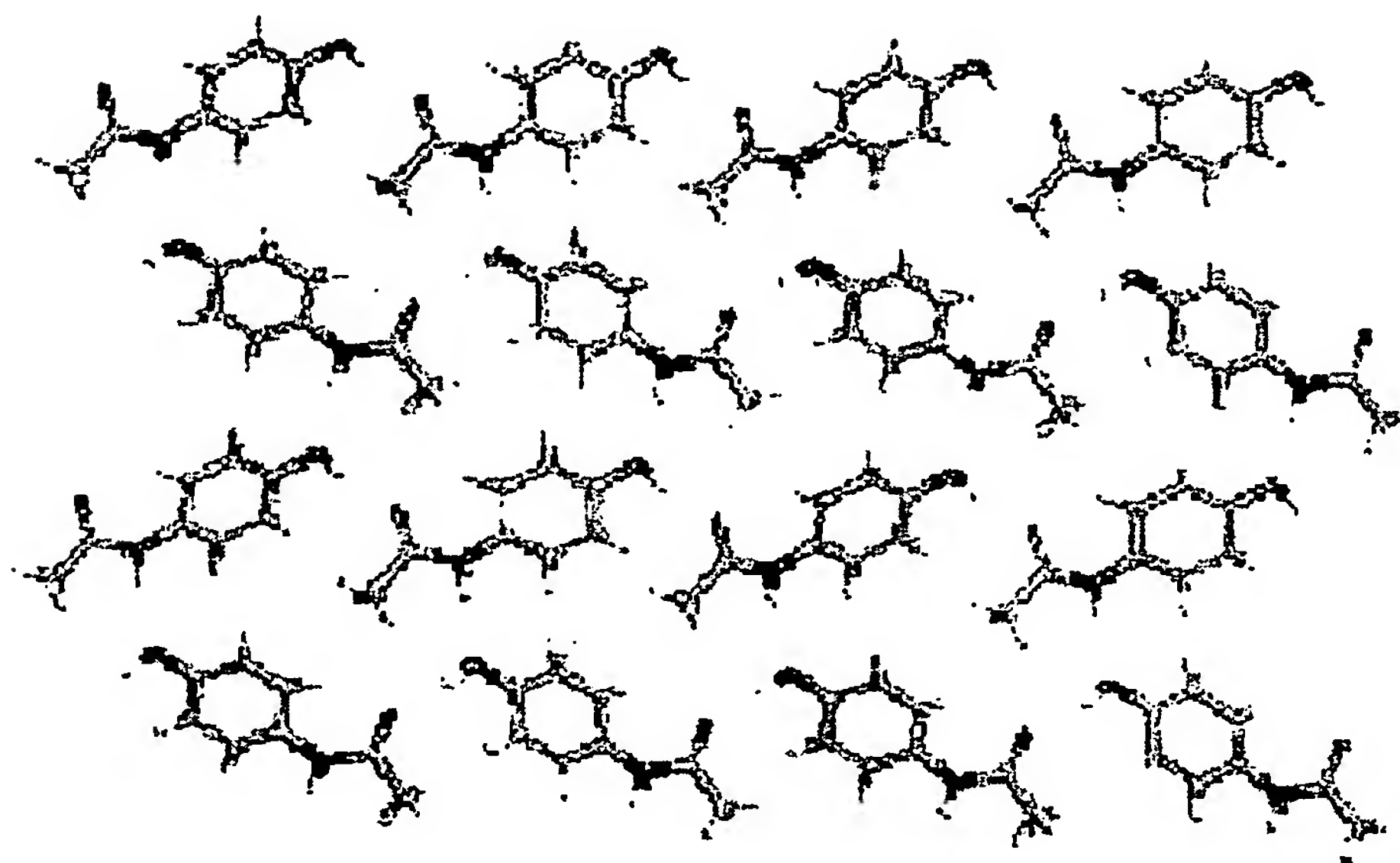


Figure 44A

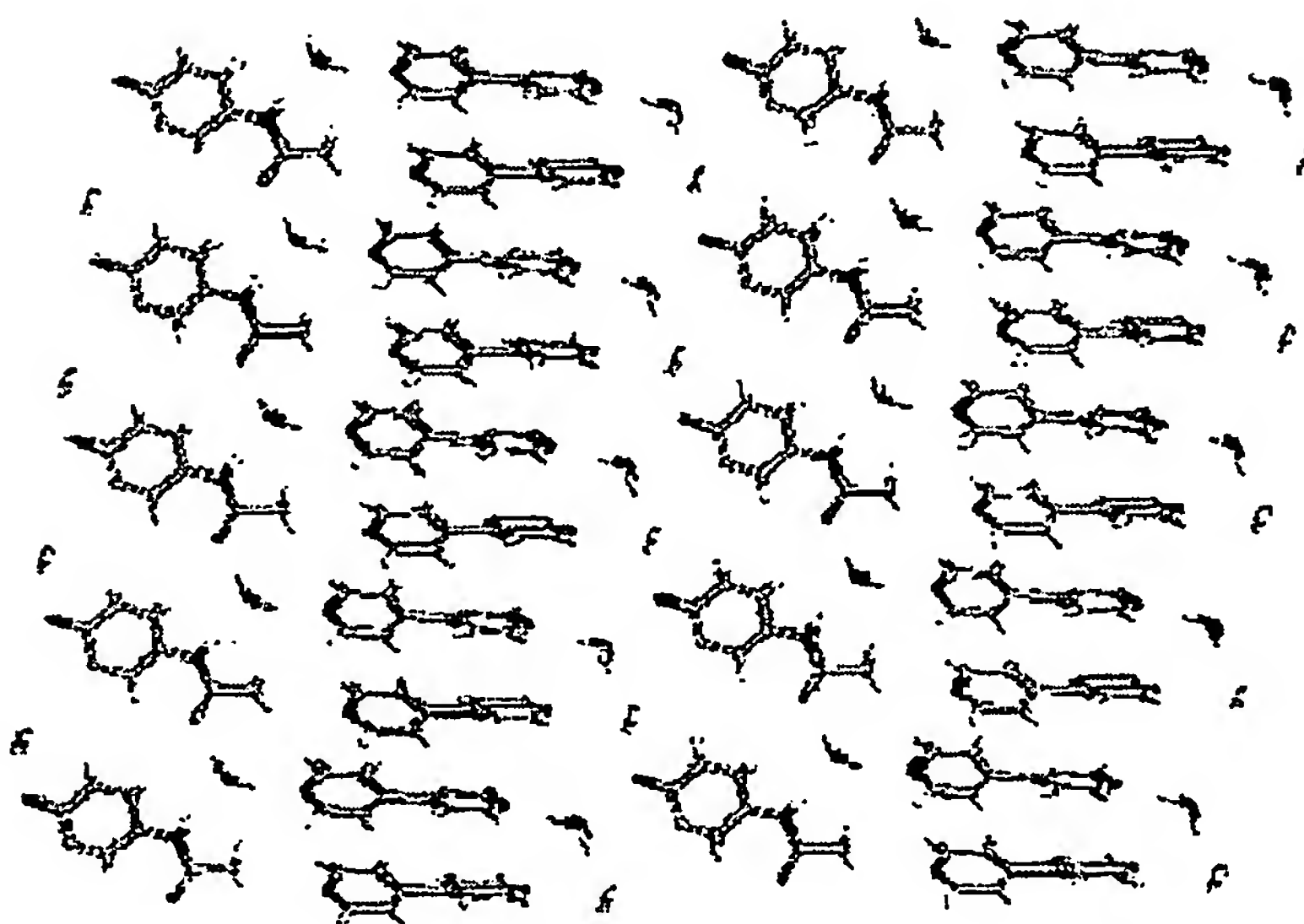


Figure 44B

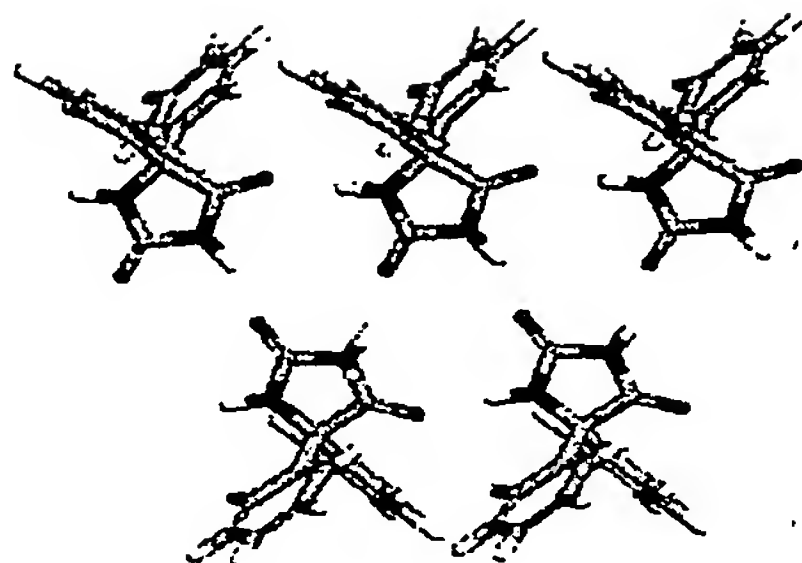


Figure 45A

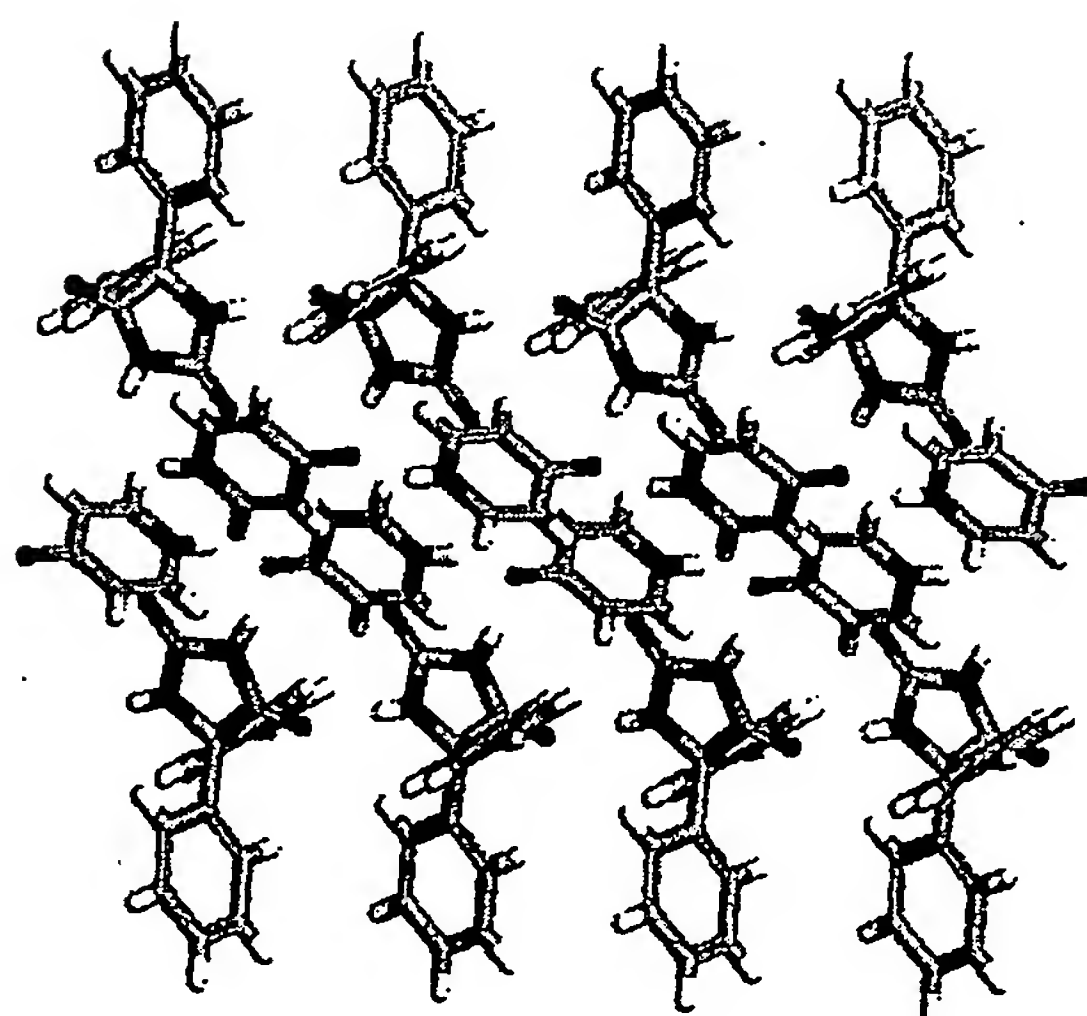


Figure 45B

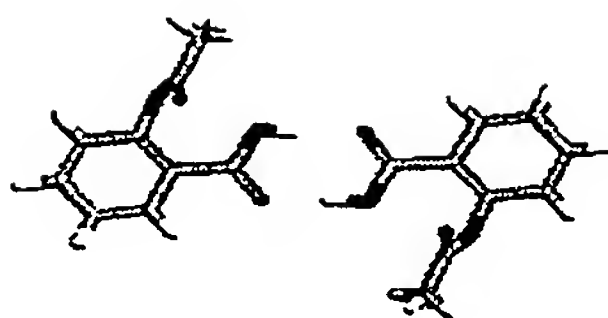


Figure 46A

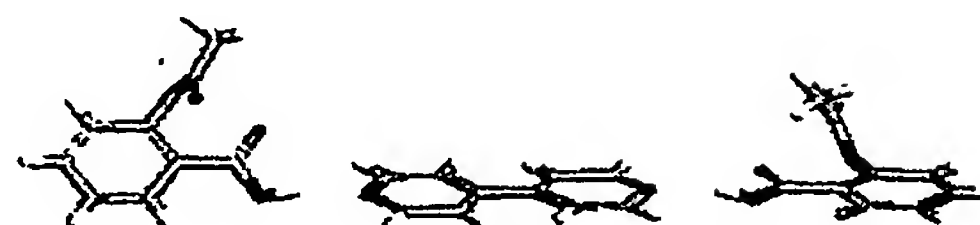


Figure 46C

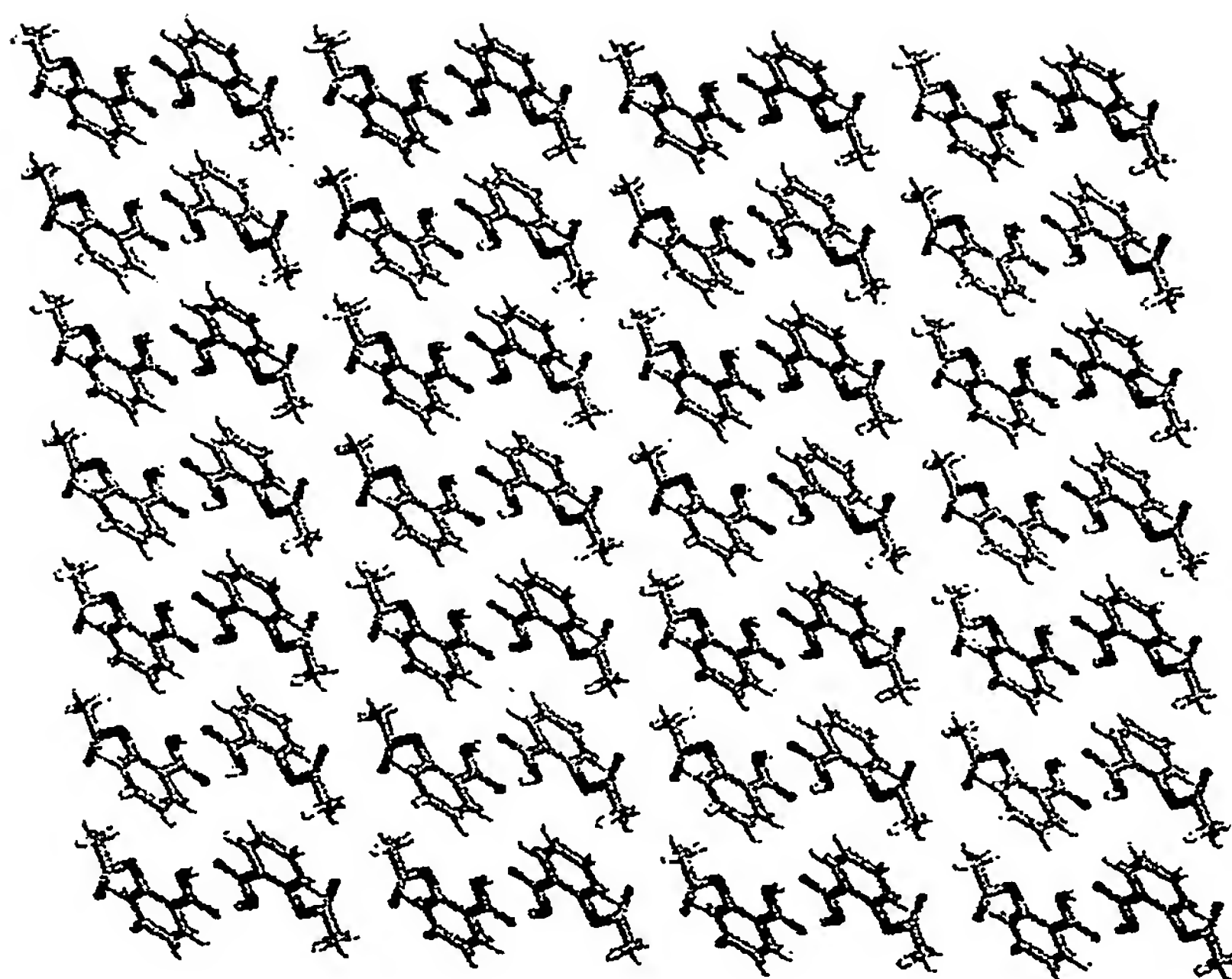


Figure 46B

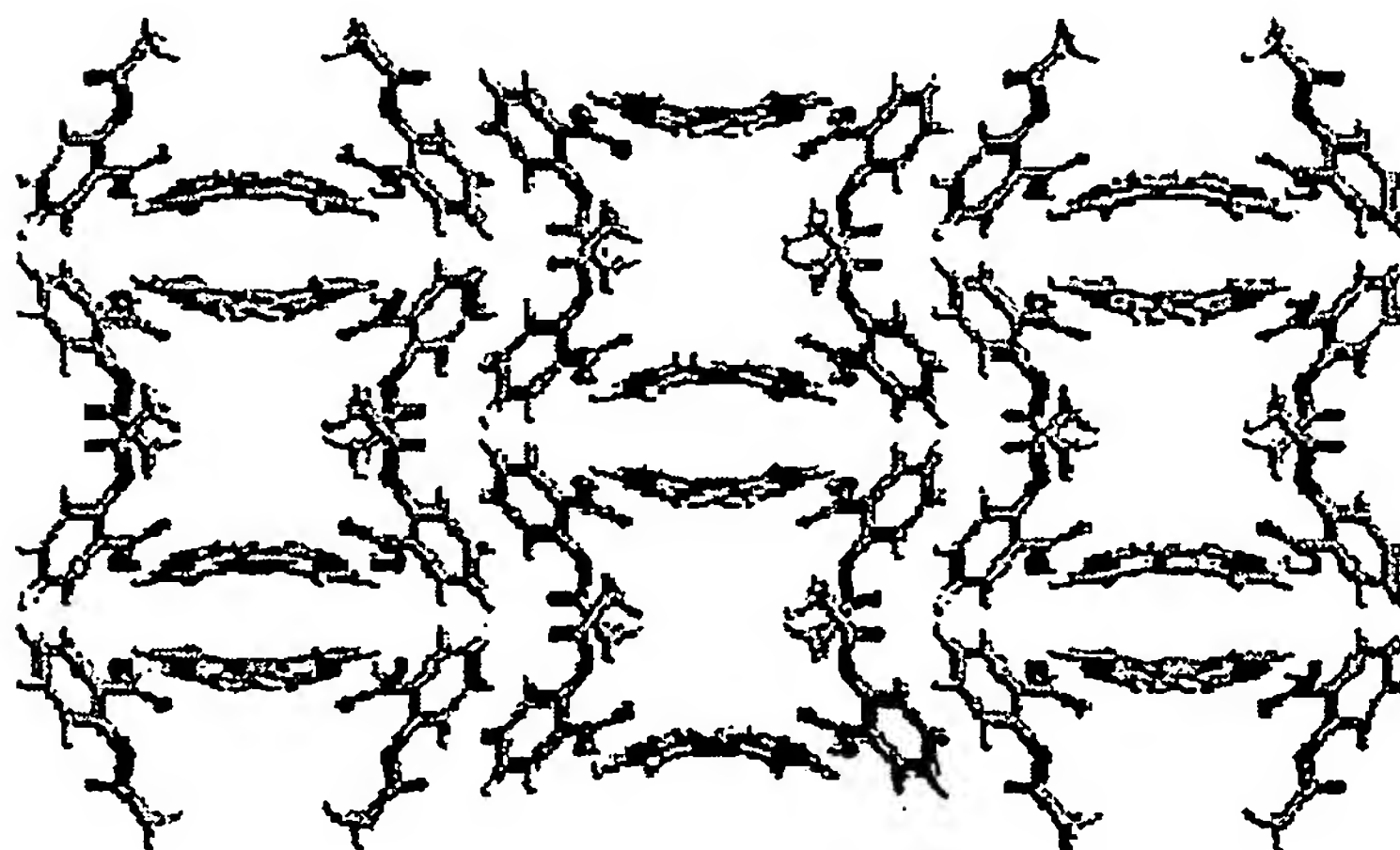


Figure 46D

Figure 47A

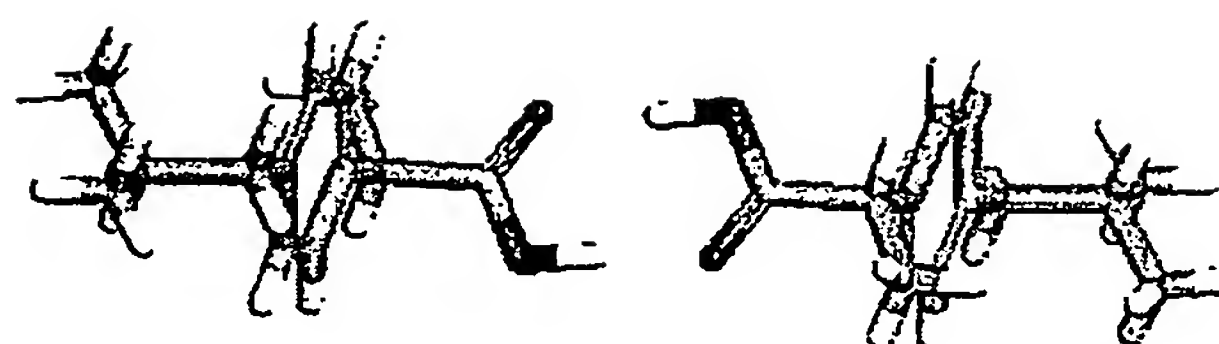


Figure 47C

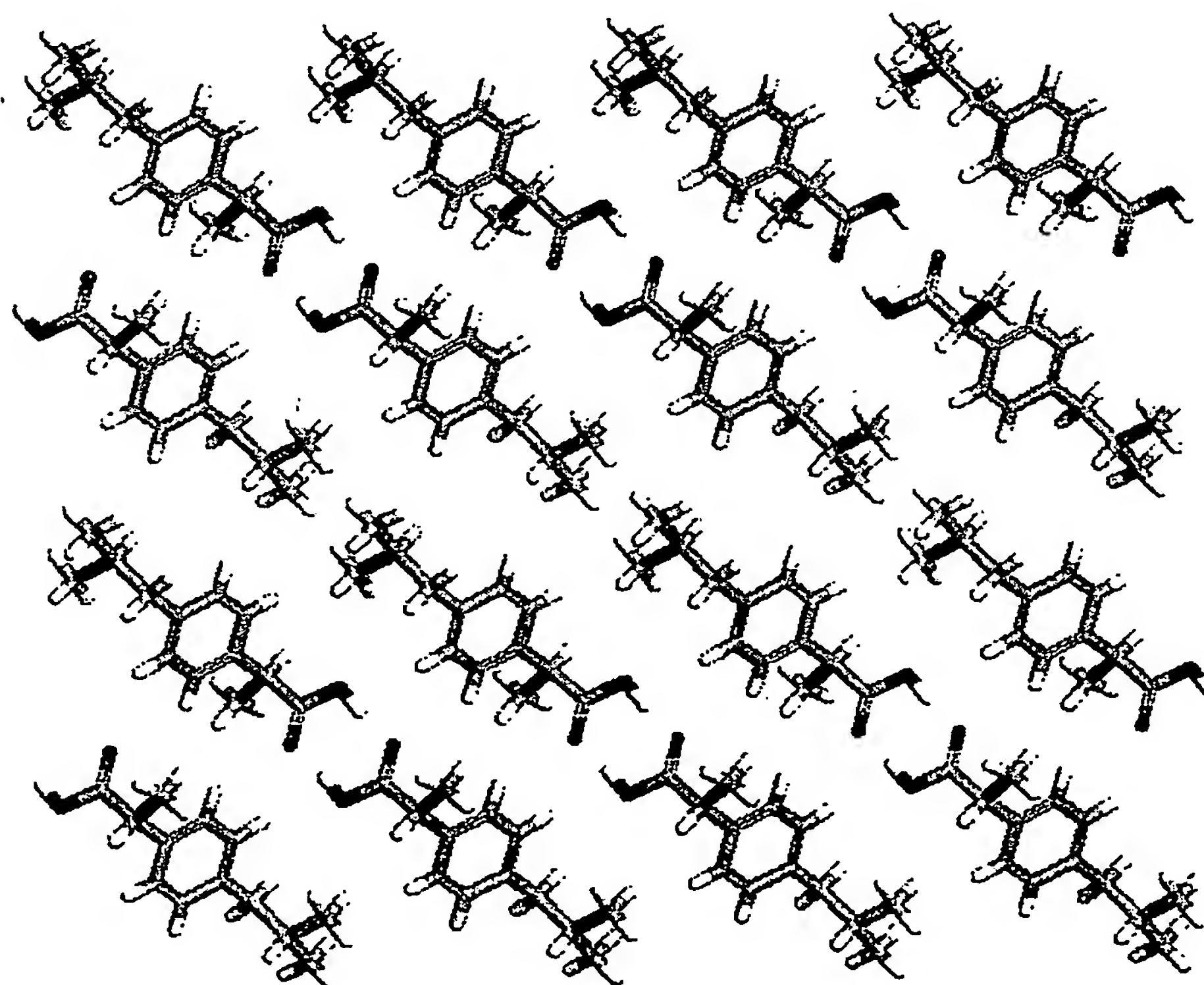
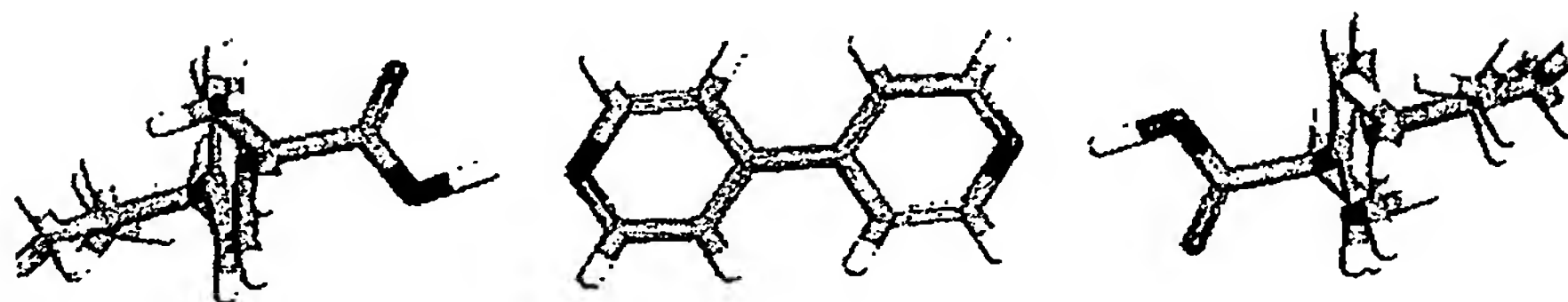


Figure 47B

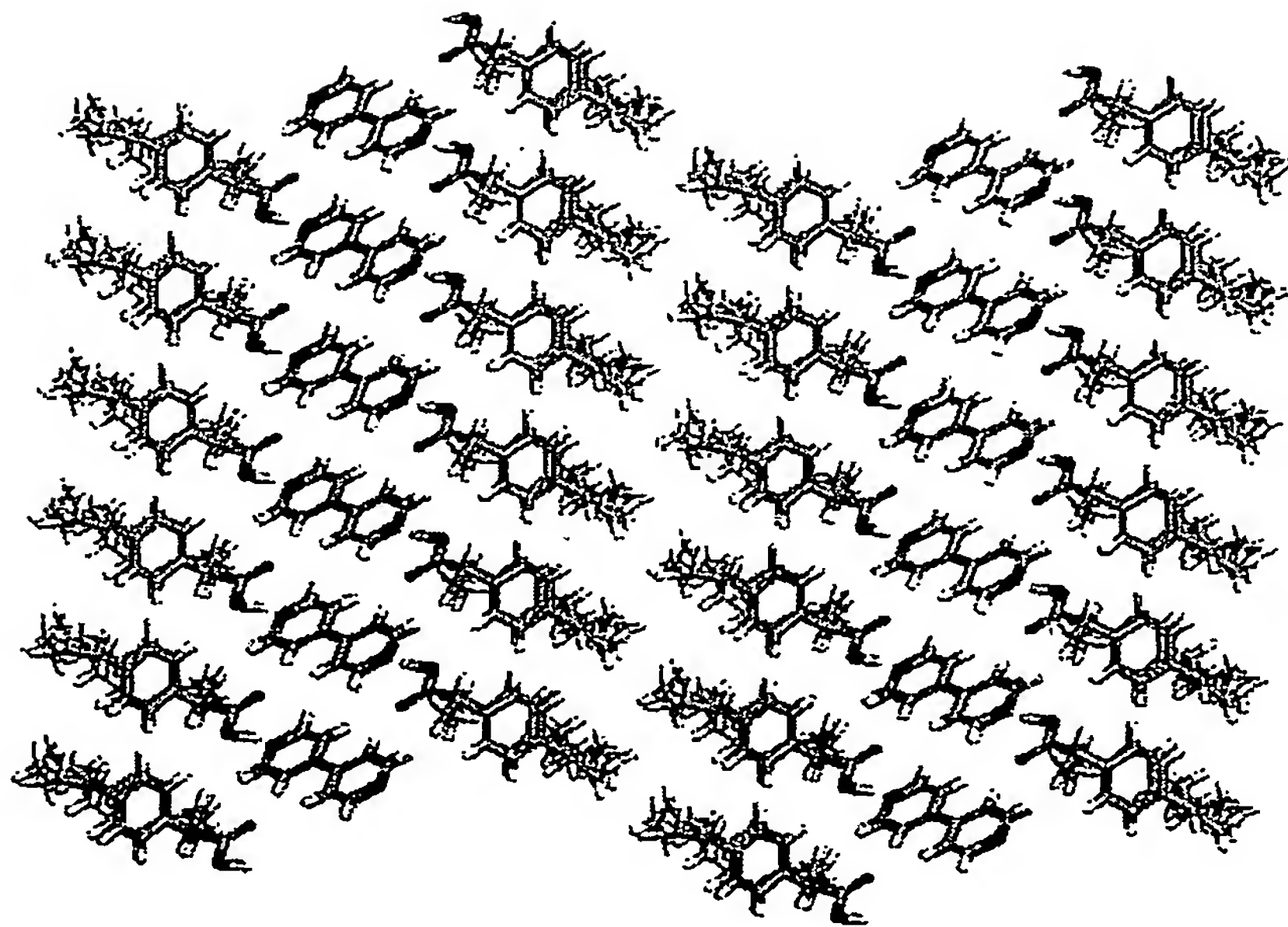


Figure 47D

Figure 48A

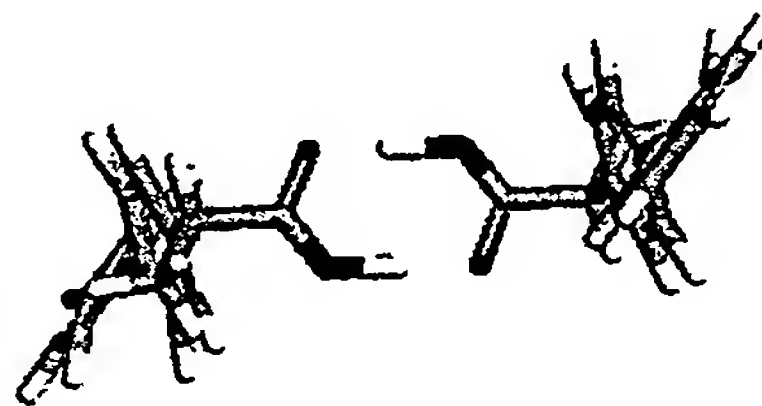
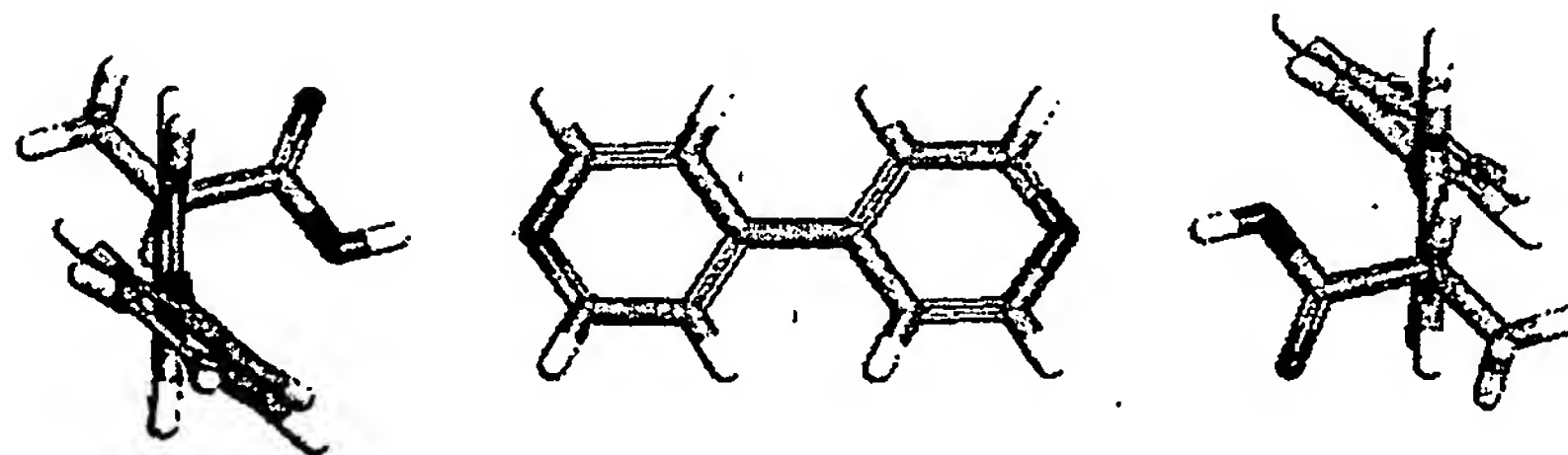


Figure 48C



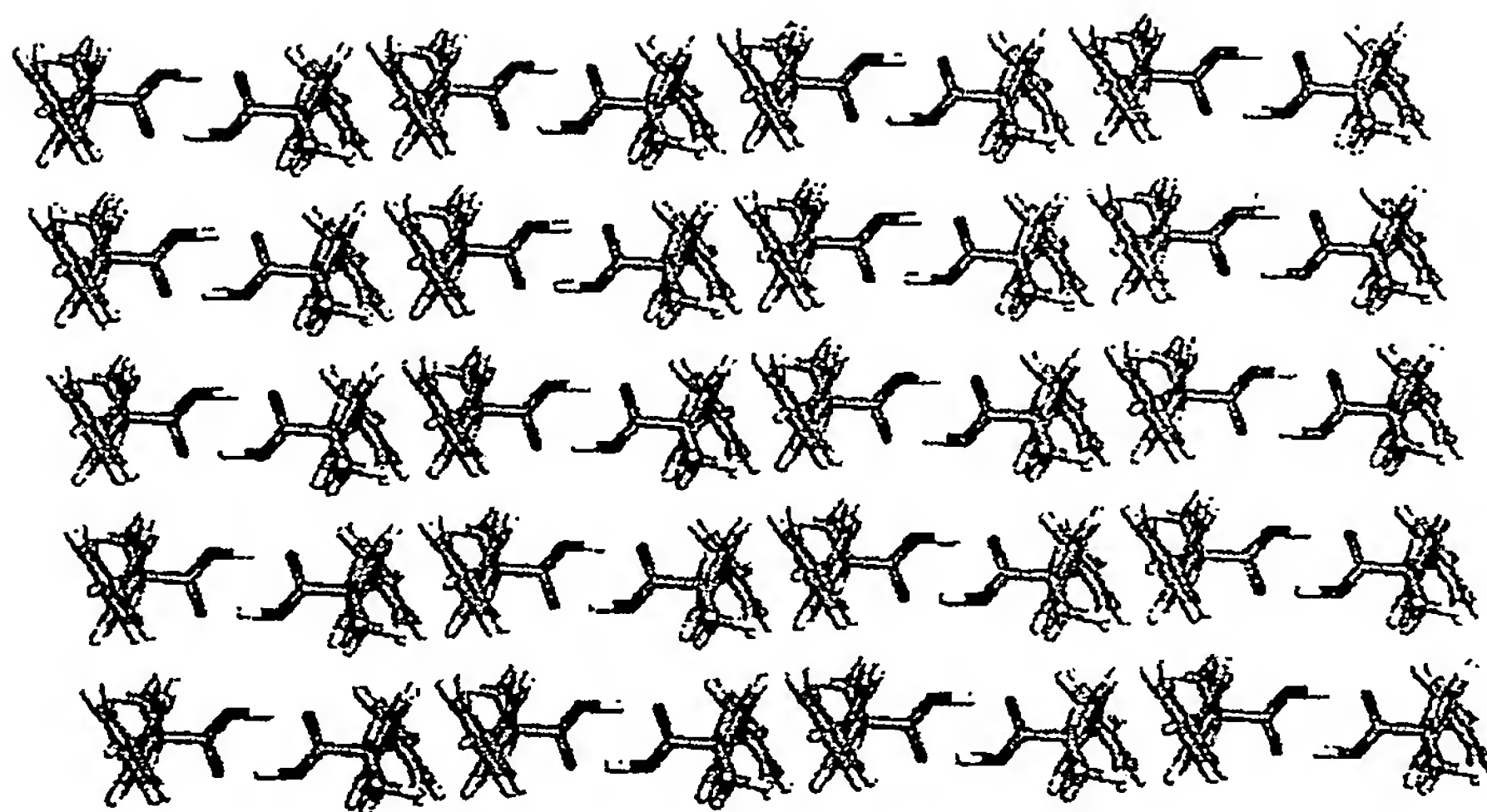


Figure 48B

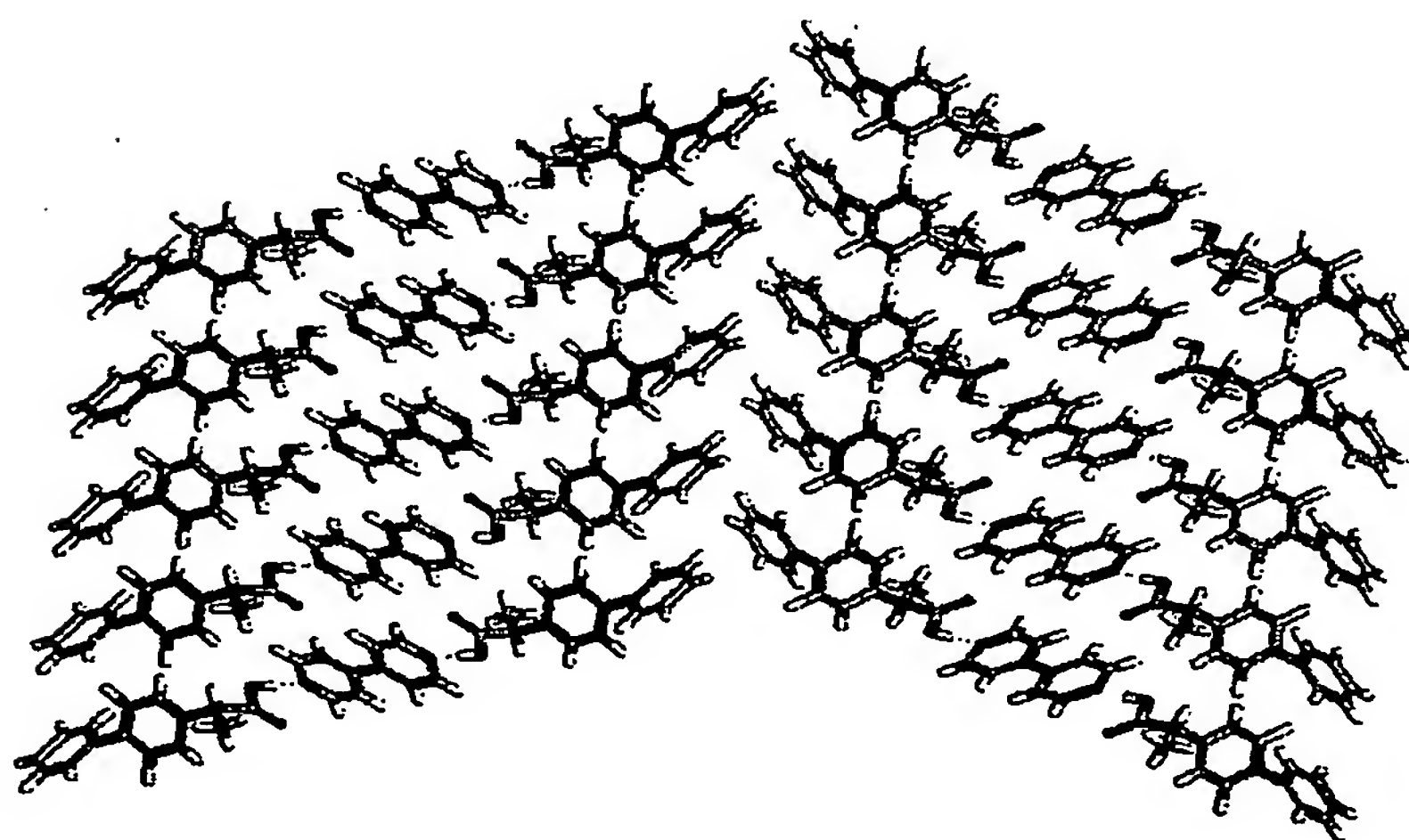


Figure 48D

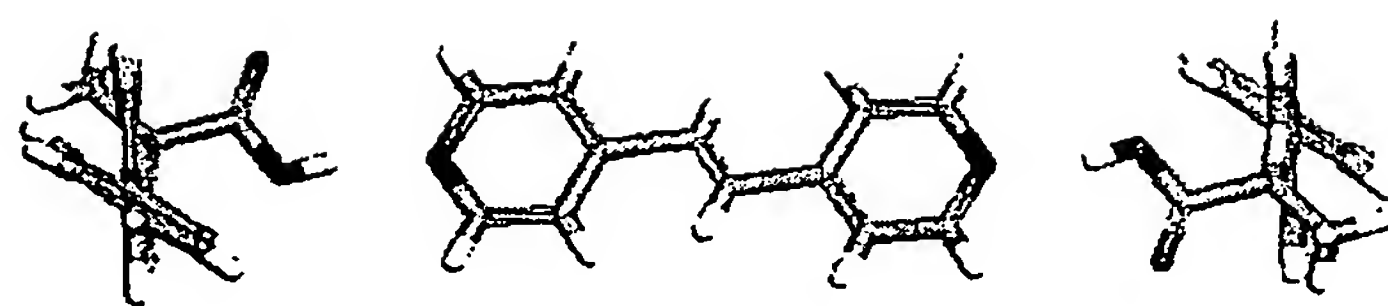


Figure 49A

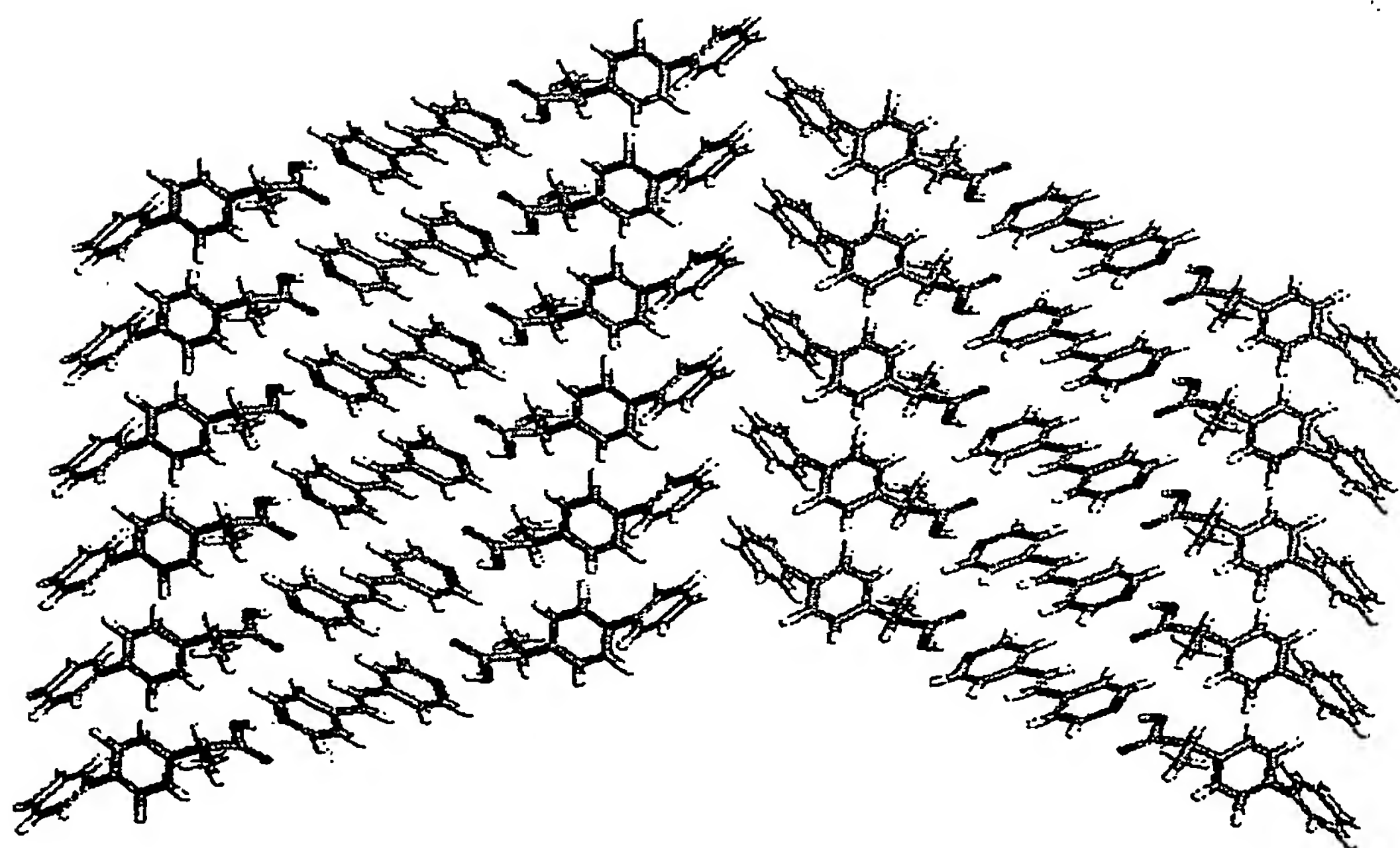


Figure 49B



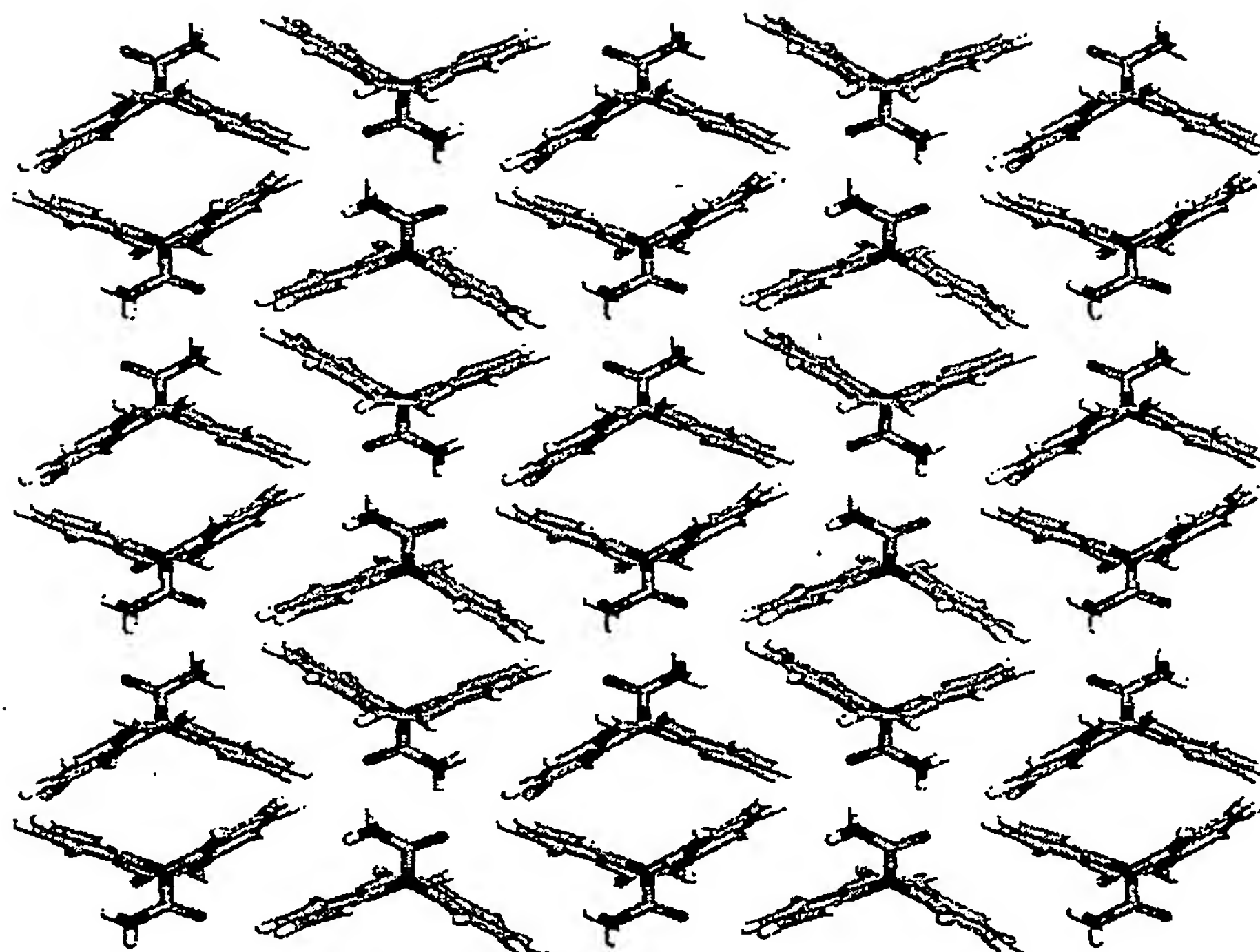


Figure 50A

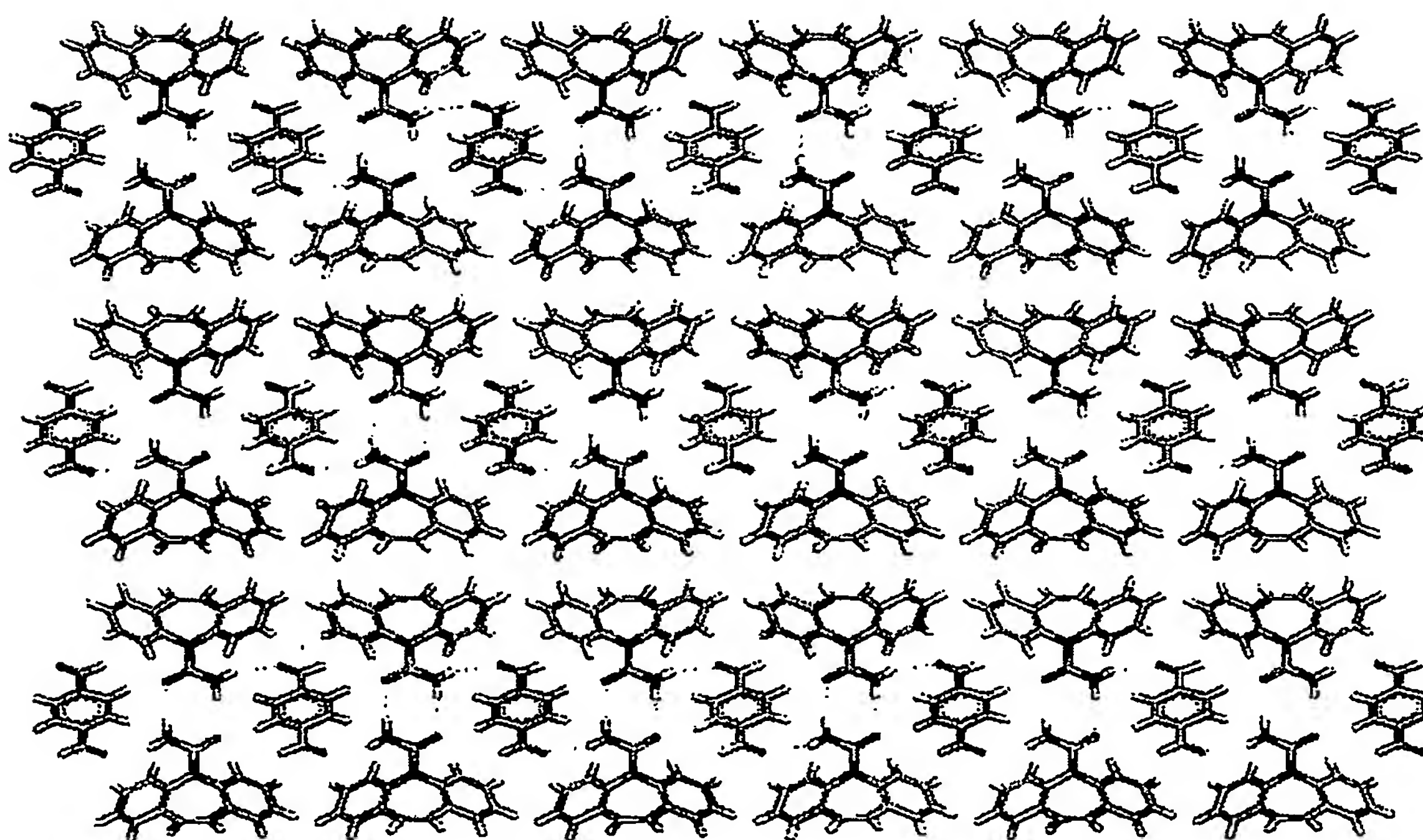


Figure 50B

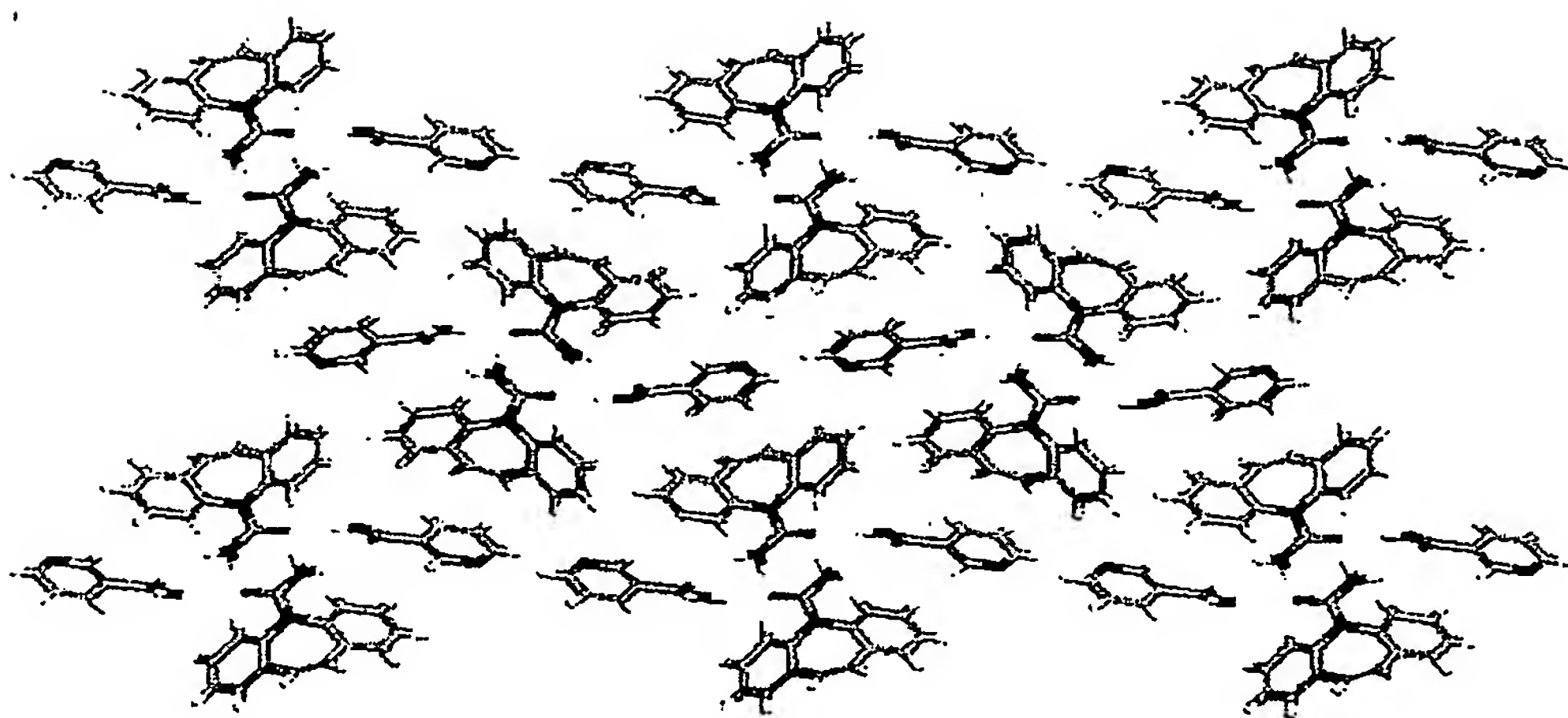


Figure 51

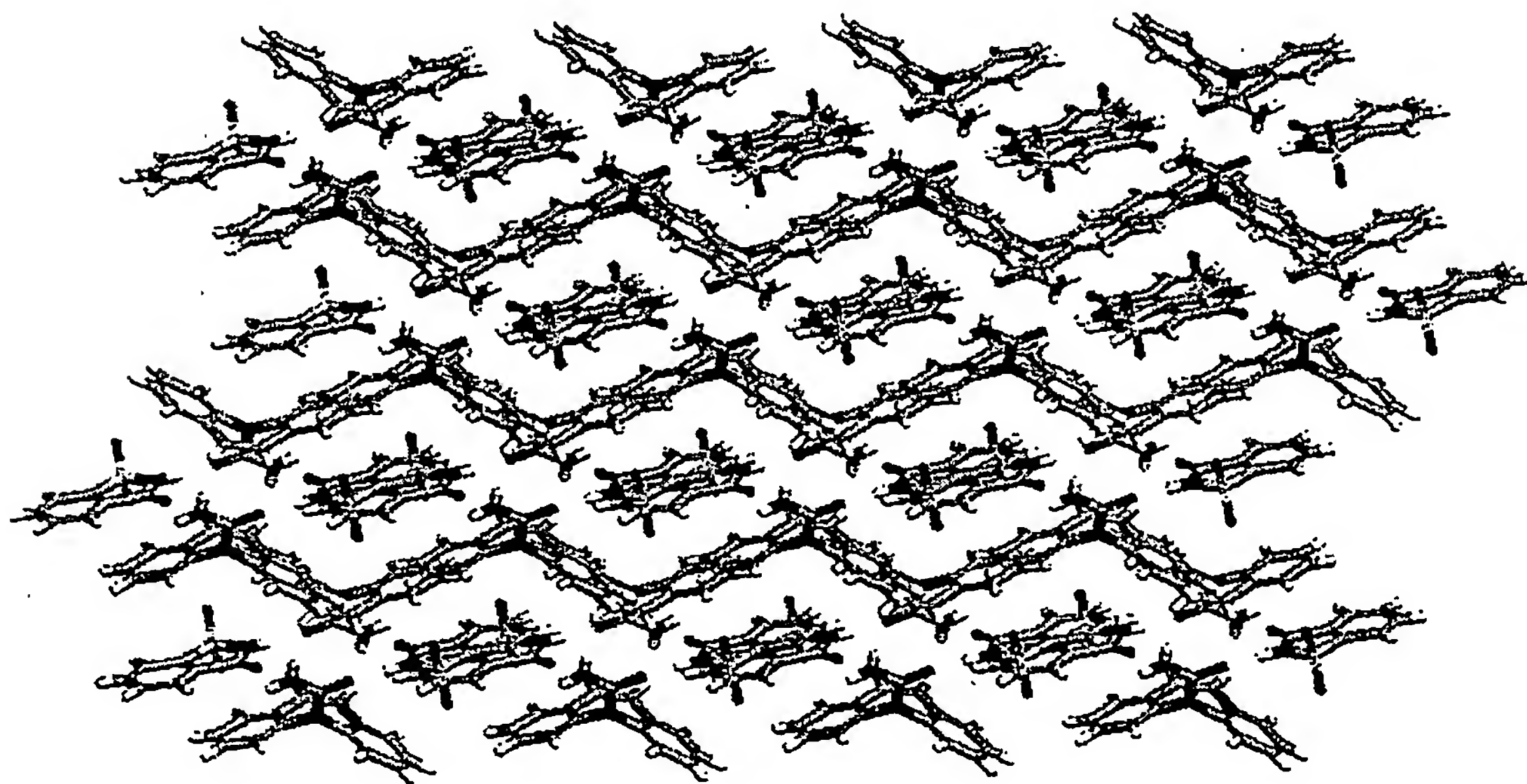


Figure 52

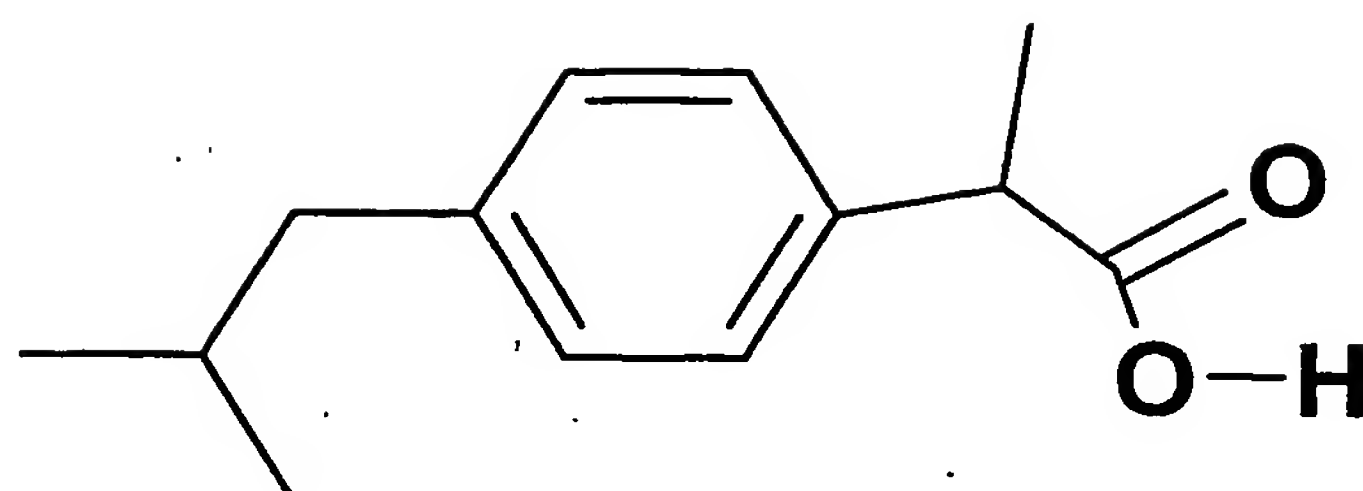


Figure 53A

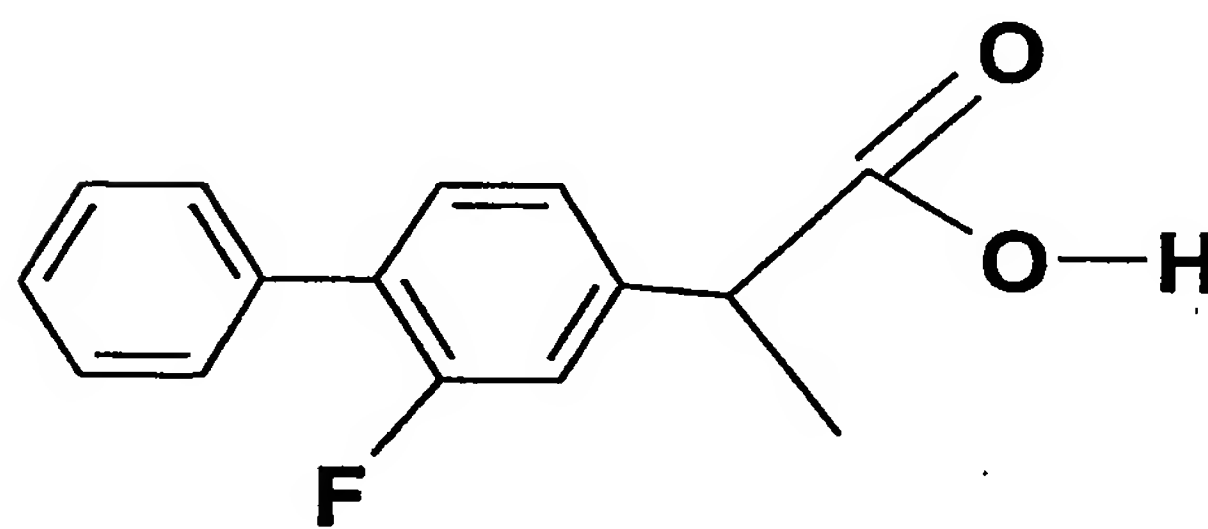


Figure 53B

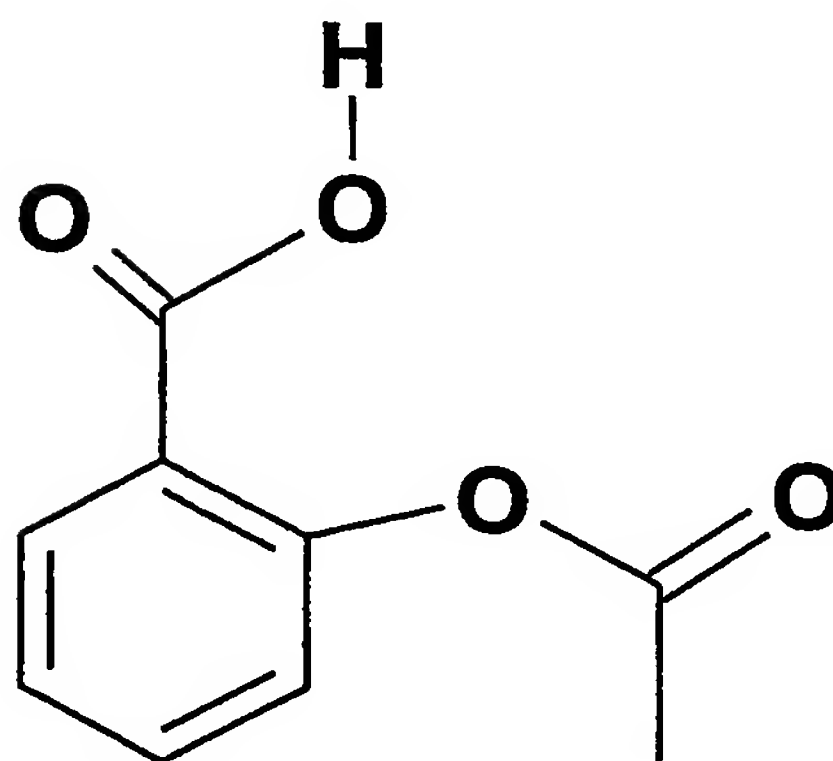


Figure 53C

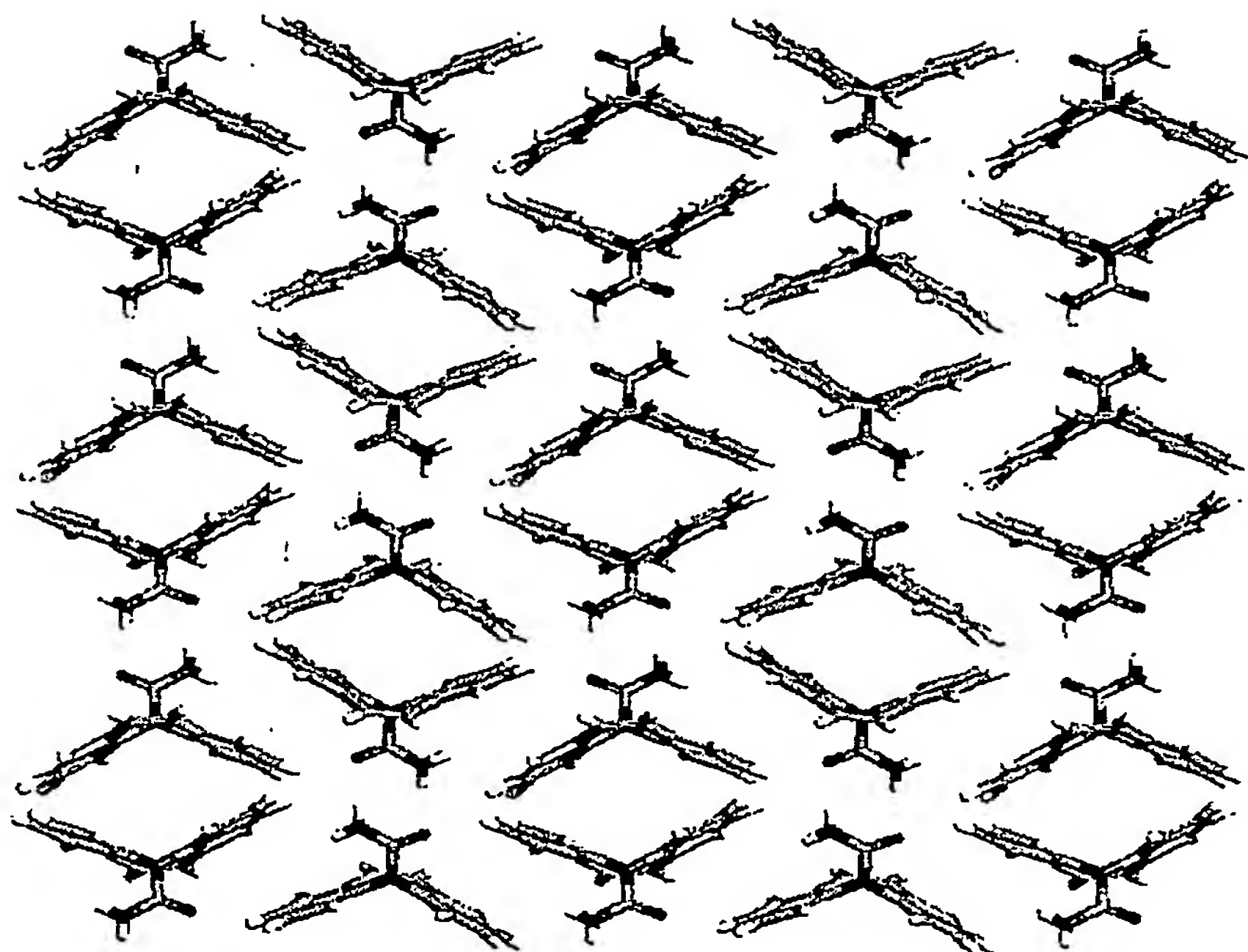


Figure 54A

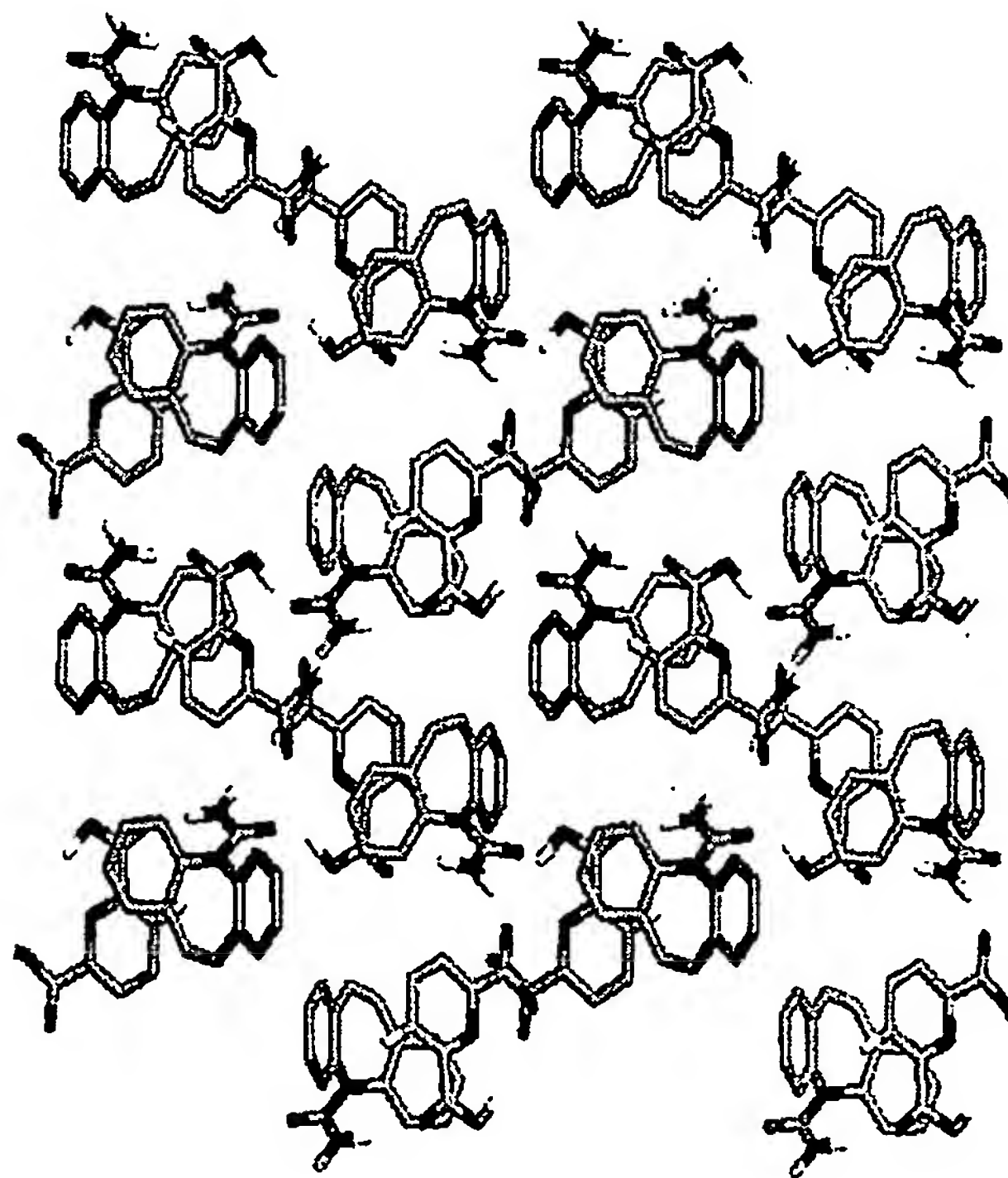


Figure 54B

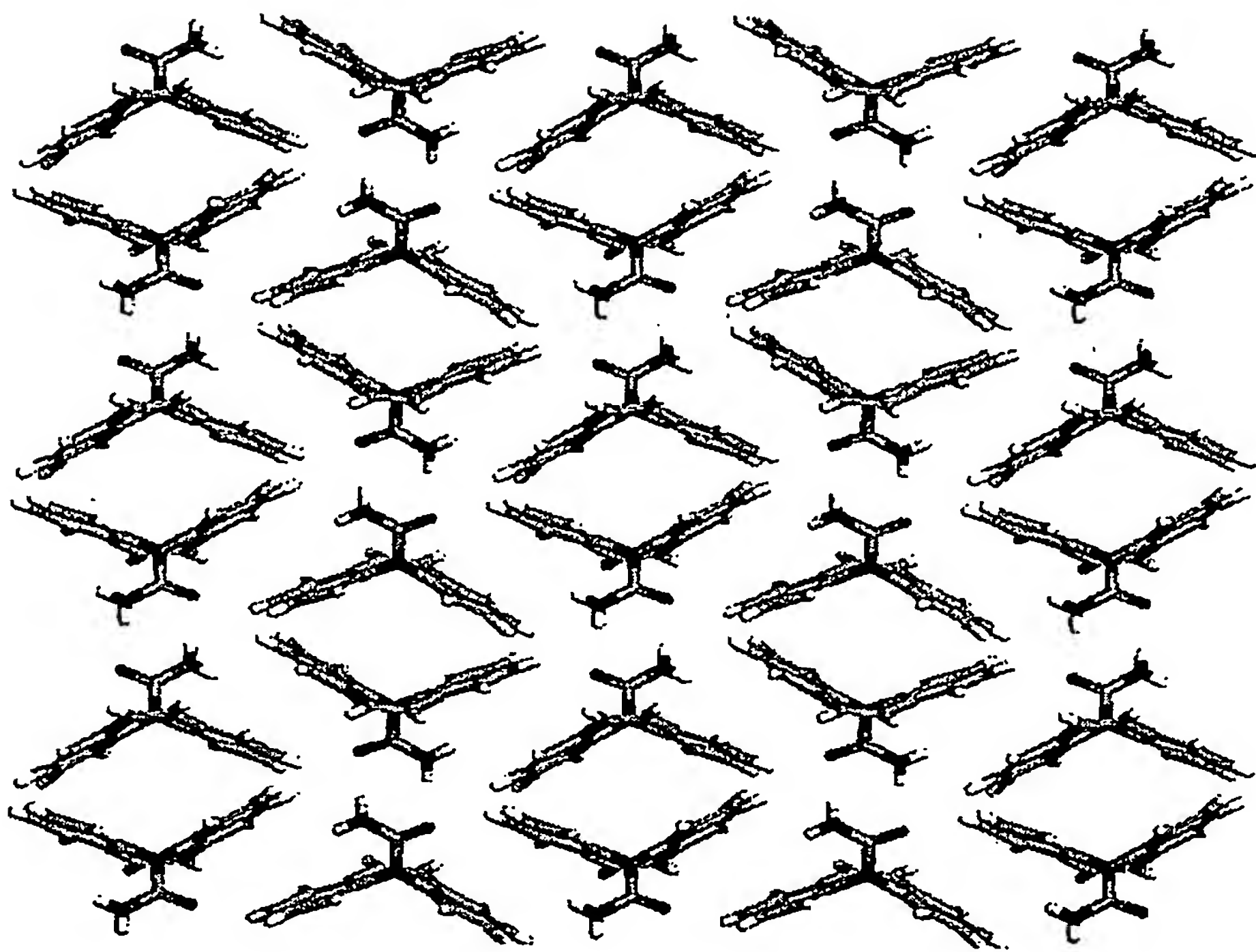


Figure 55A

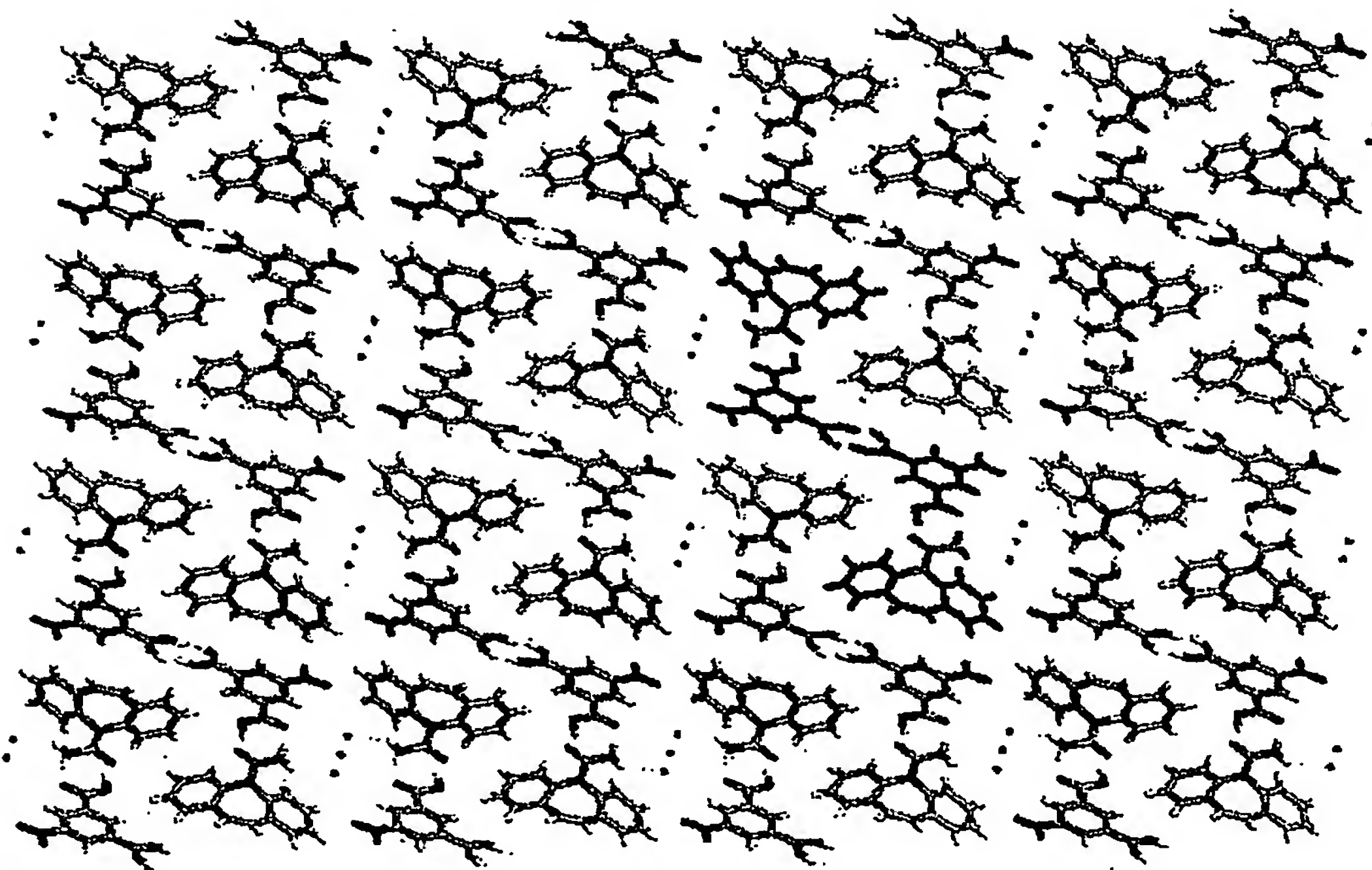


Figure 55B



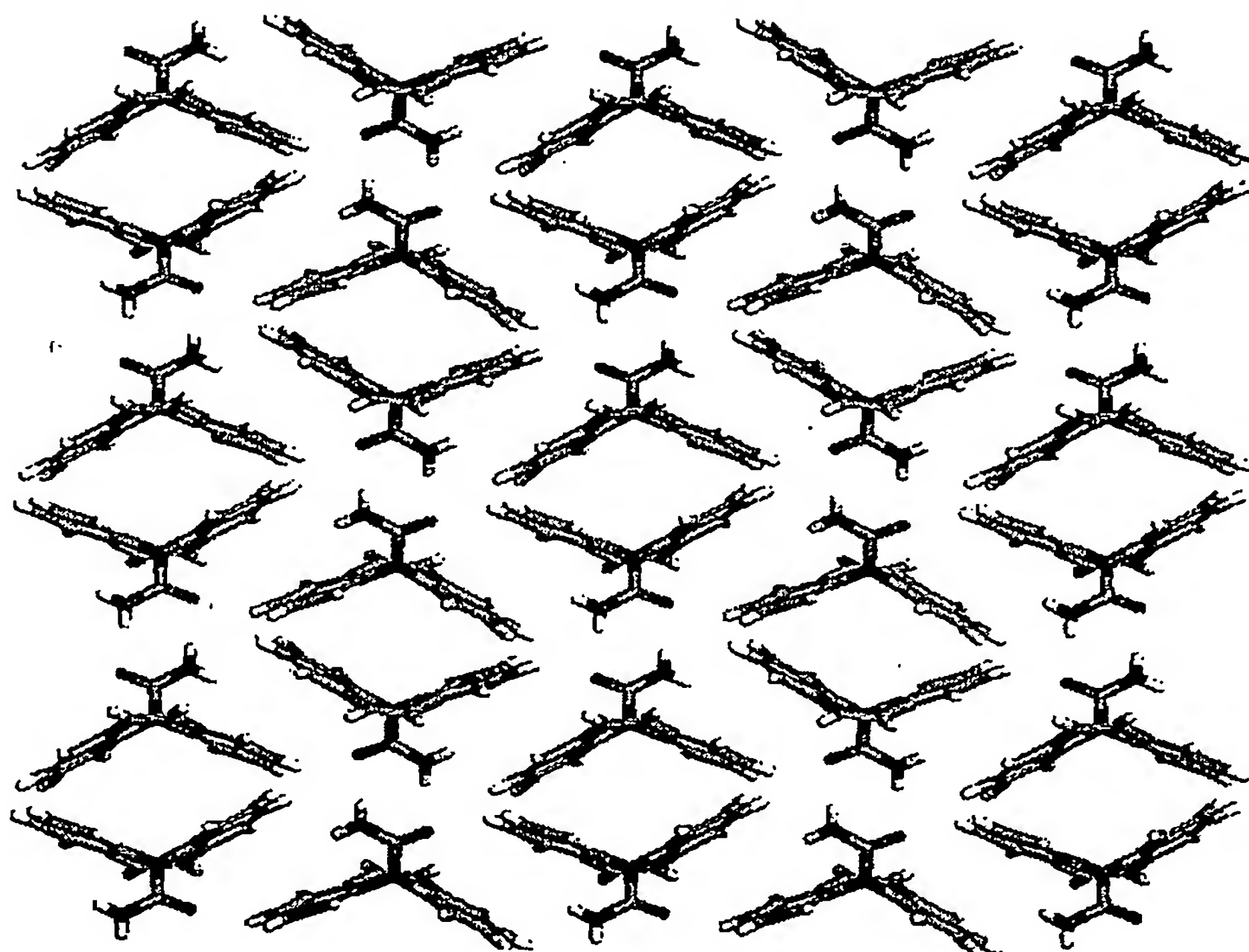


Figure 56A

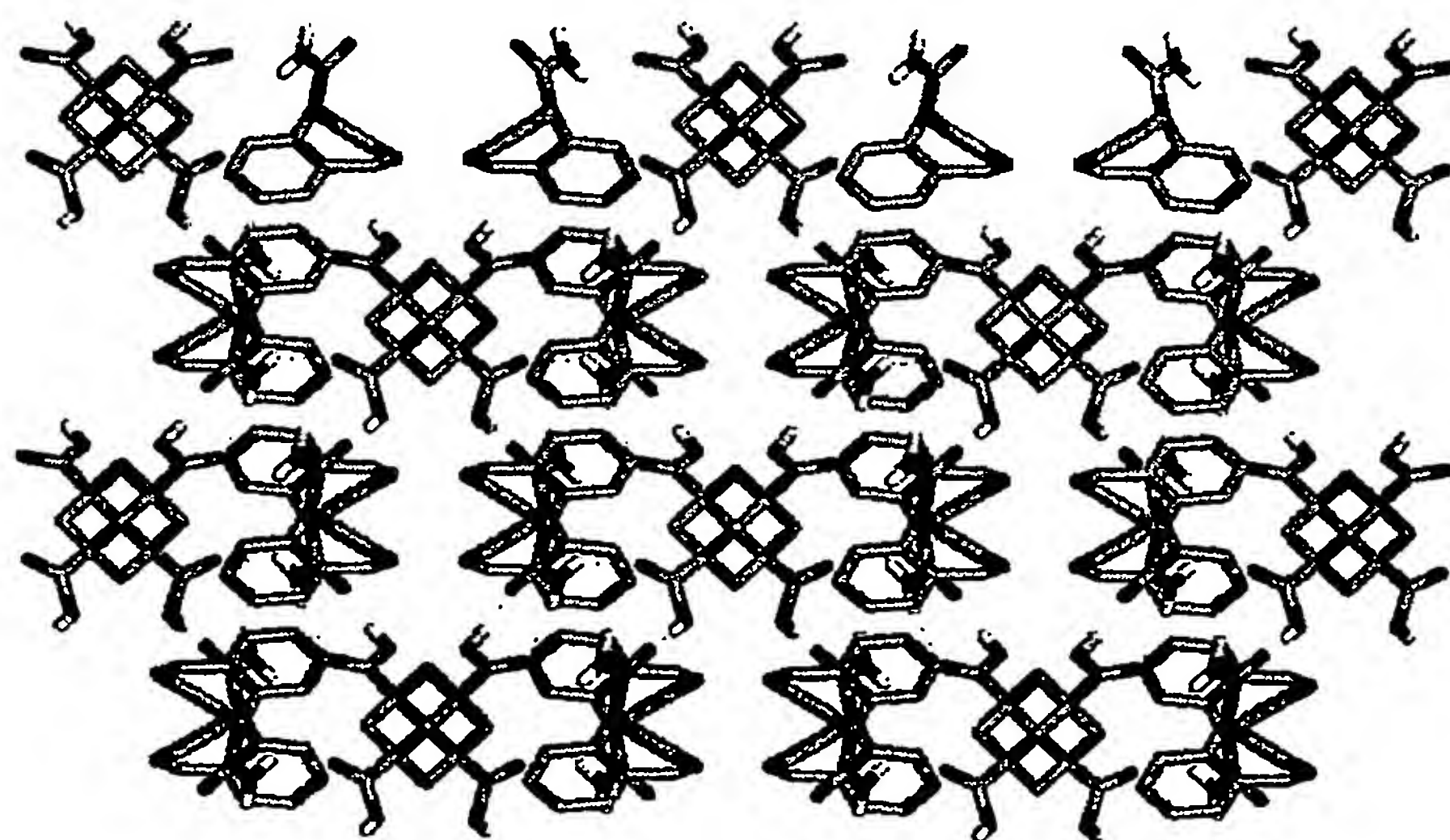


Figure 56B

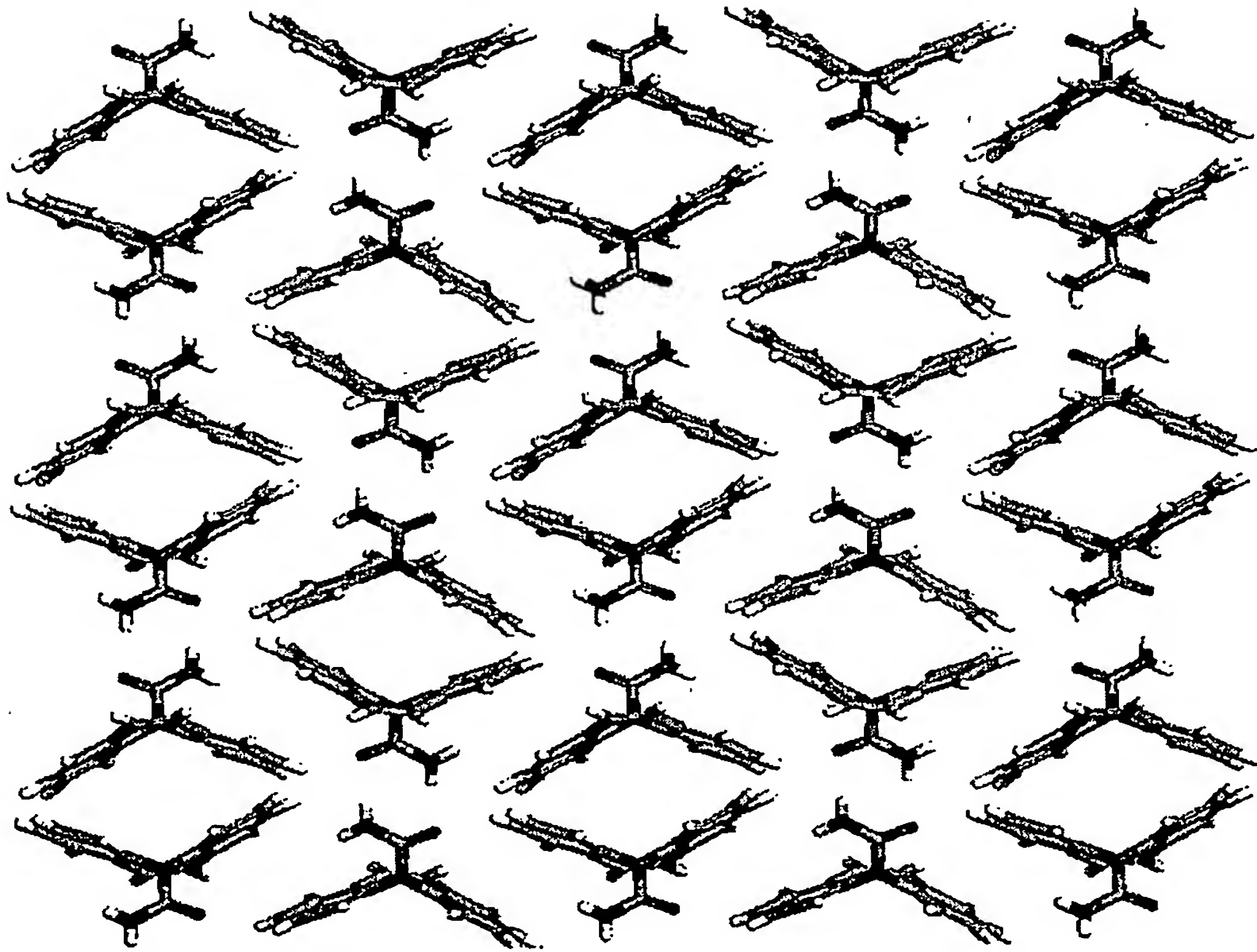


Figure 57A

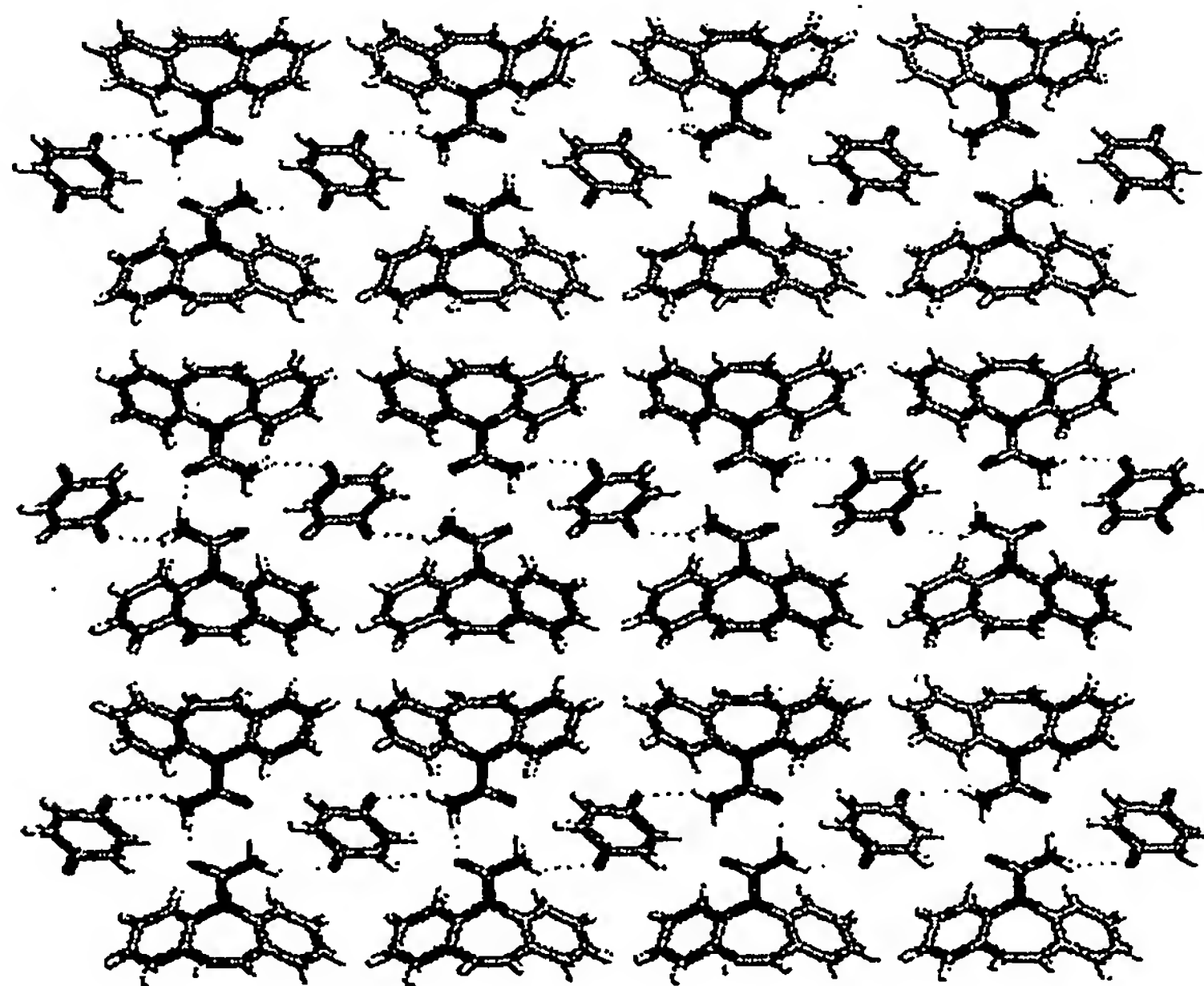


Figure 57B



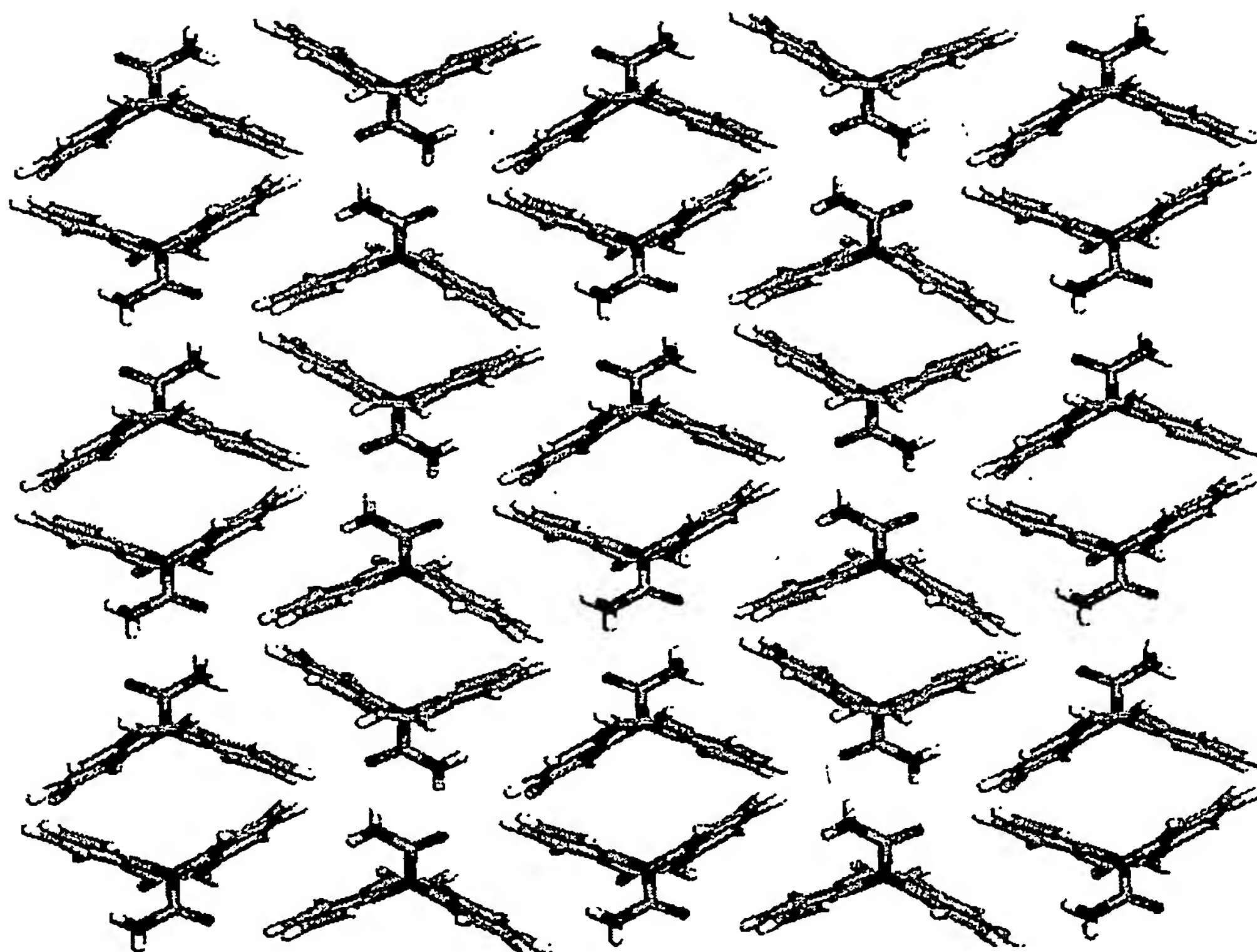


Figure 58A

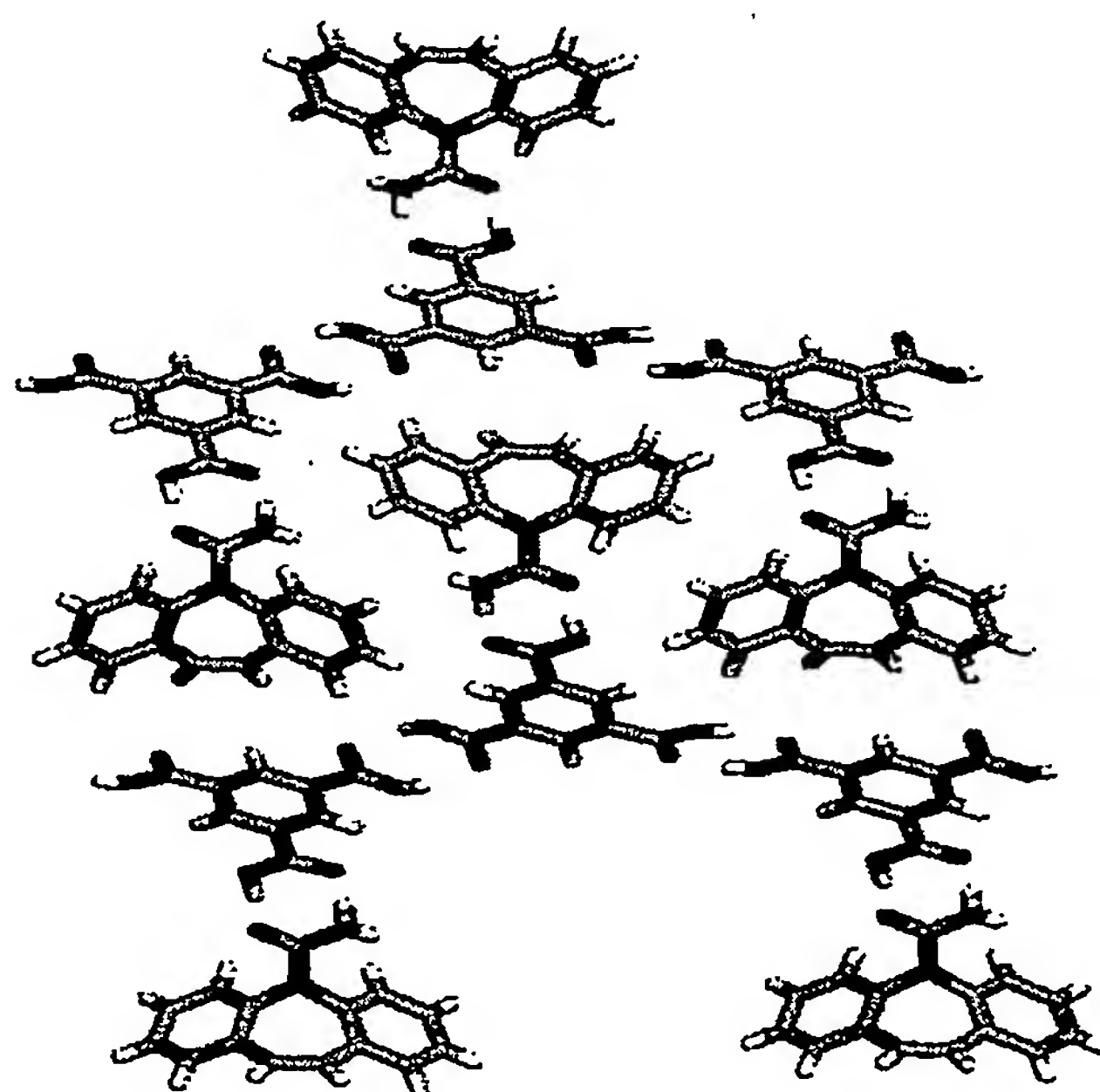


Figure 58B

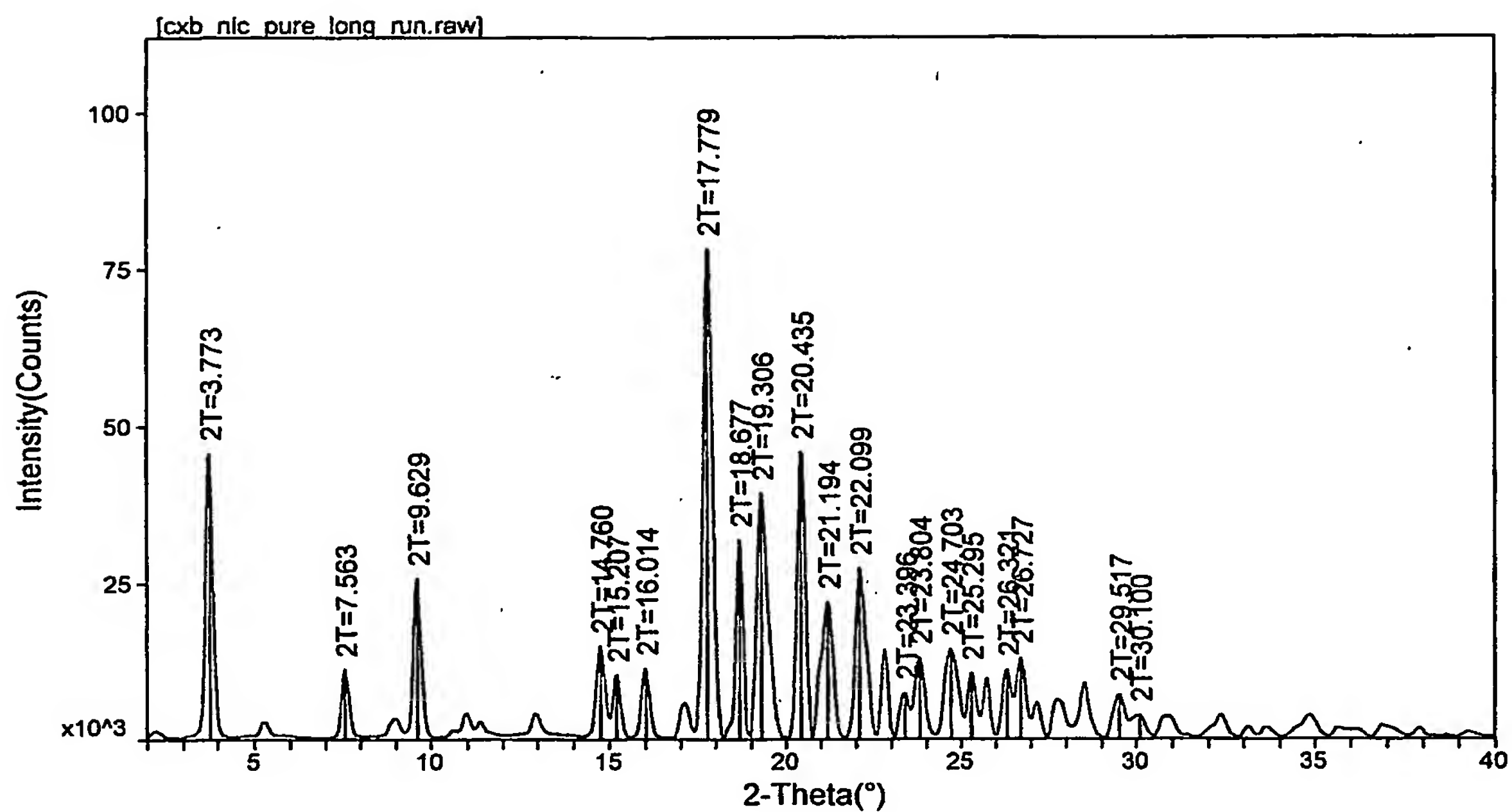


Figure 59

Sample: CUS 4C  
Scan: 1 330 mg  
Method: Vario

DSC

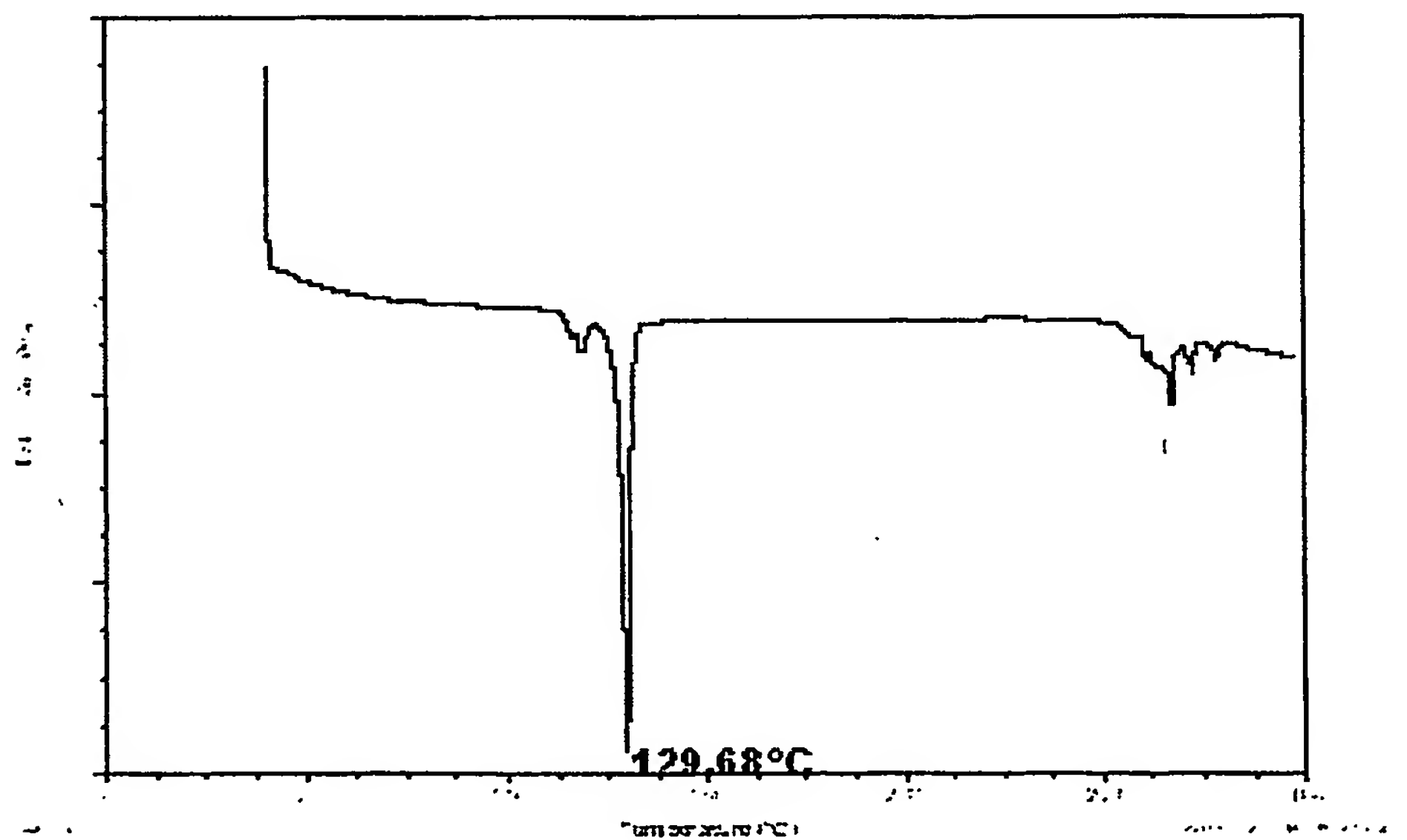


Figure 60

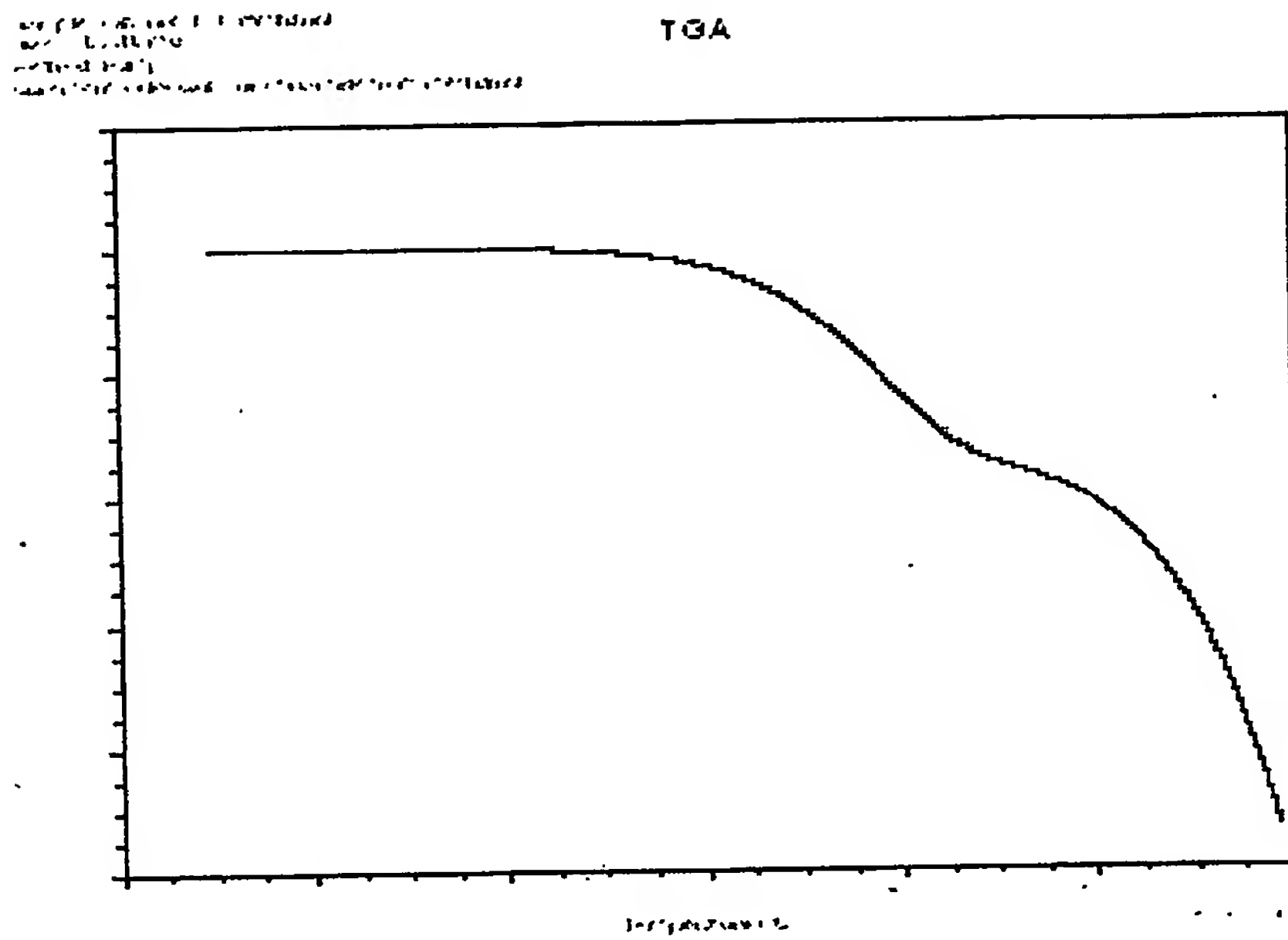


Figure 61

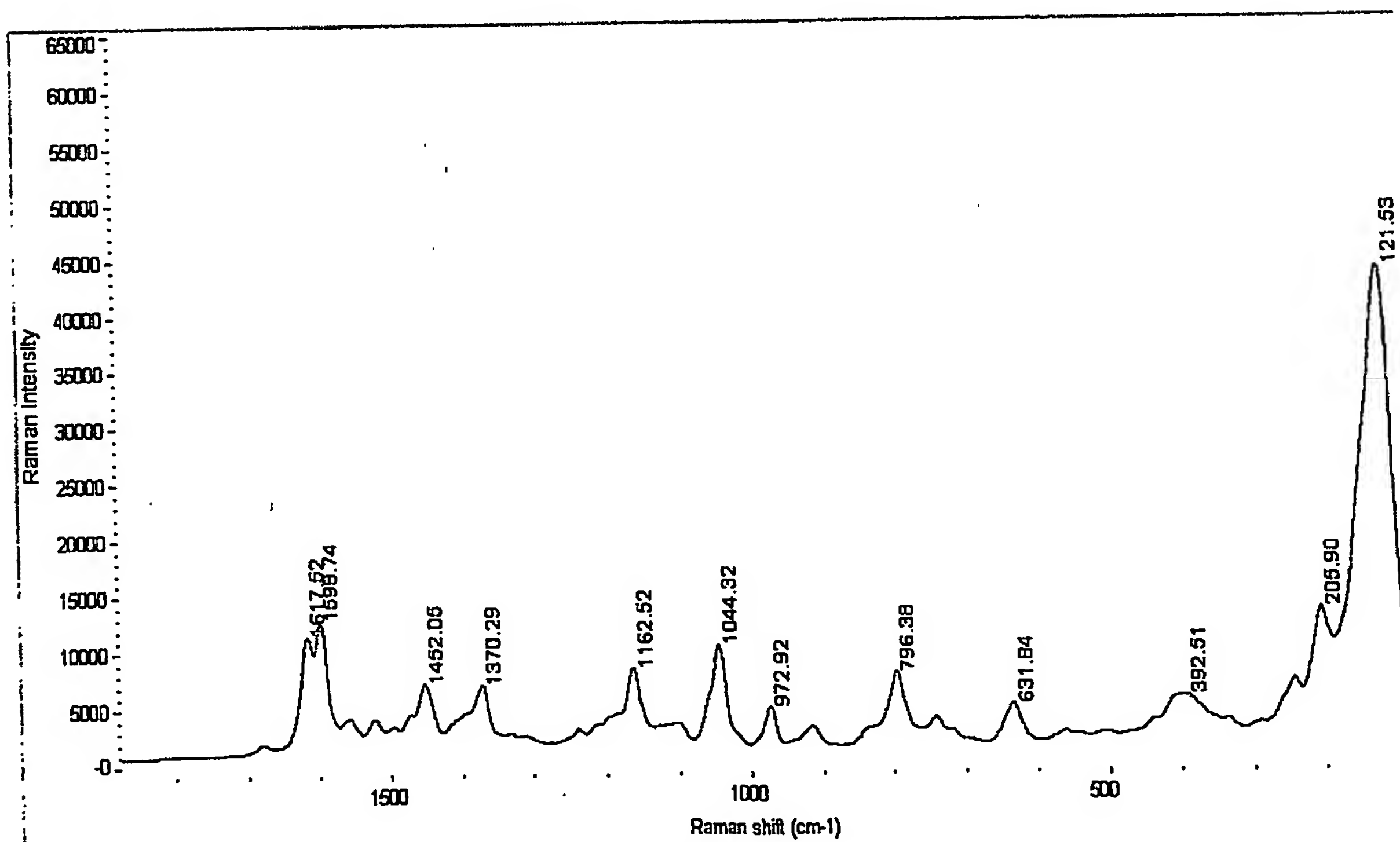
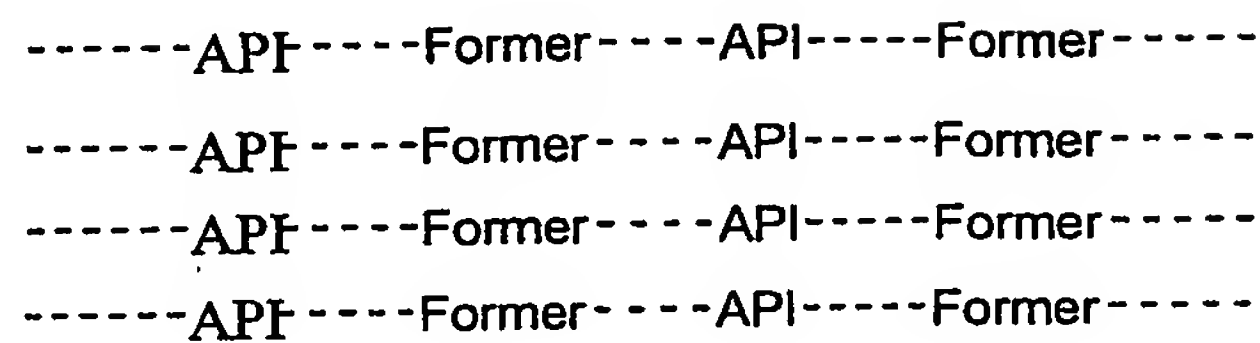


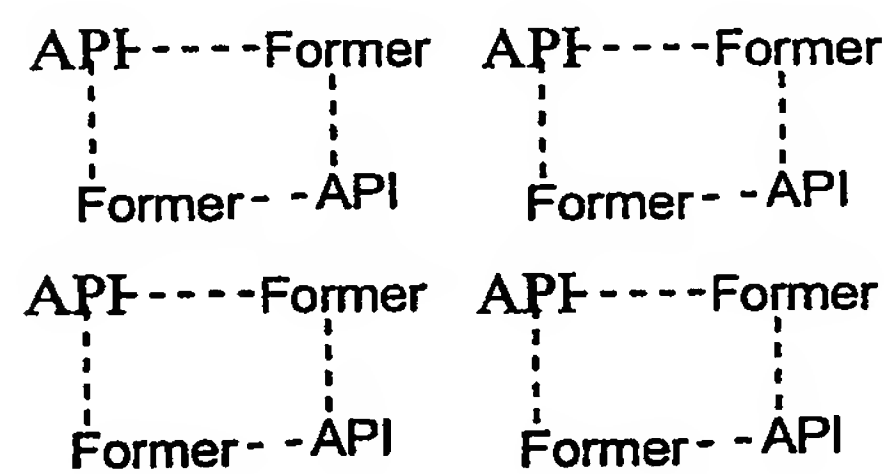
Figure 62

(Figure 63)

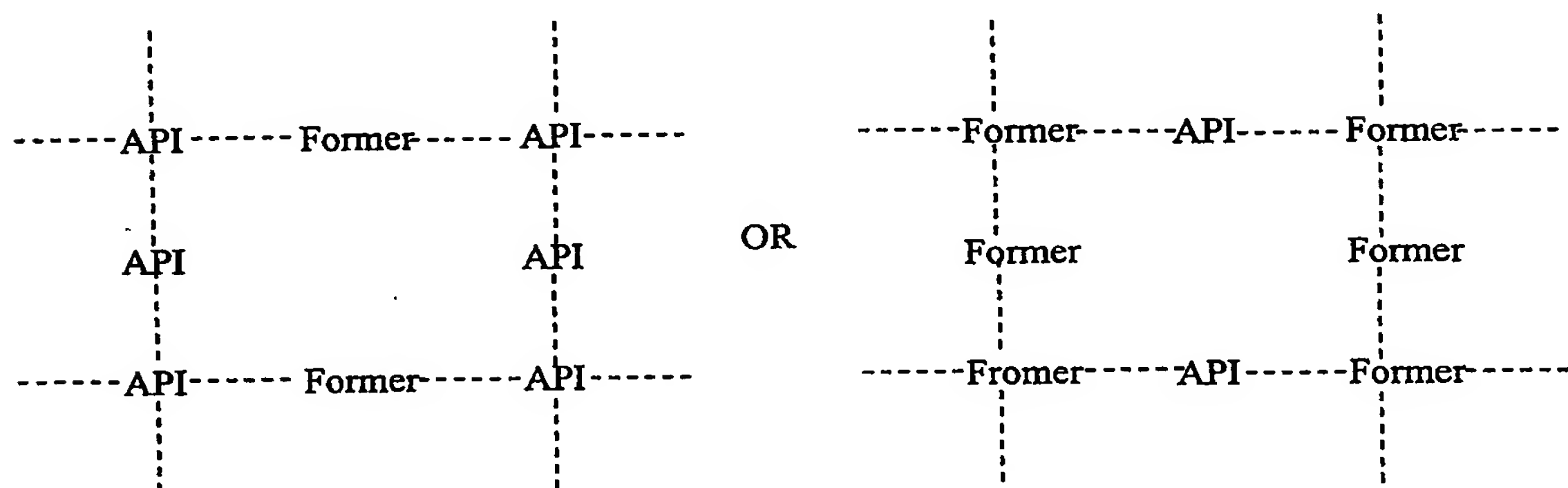
1. One-dimensional (linear) hydrogen-bonded chains:



2. Isolated rings:



3. Extended Networks:



4. Isolated triads:

